THE CHEMIST AND DRUGGIST

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For particulars of subscriptions, advertisements, &c., see the centre of the book.

THE MONTH

Our Diary for 1875 is now in the hands of the binders, and we shall have a first edition ready on the 18th instant in order to catch the Australian mail, and for our foreign subscribers generally. Copies for home distribution will be ready a few days later, and will be despatched without delay. Readers will understand that this is the work which will be presented gratis to all subscribers for 1874. To non-subscribers the price will be 3*s*., and special orders should be sent in without delay. Subscriptions dating from January next will ensure, not this book, but the Diary for 1876, to be published next year. We believe all chemists and druggists will be pleased with this work. Besides the usual skeleton pages, interleaved with blotting paper, in addition to a considerable mass of valuable matter, there will be found special articles on the Fitting up of a Laboratory, Aërated Waters, Book-keeping, County Court Process, Natural Mineral Waters, &c.; also a comprehensive Directory of London Hospitals and their staffs, Public Offices, &c., with names and addresses of the leading London physicians and surgeons. The binding will be cloth, gilt.

Very little beyond formal business was transacted at the last meeting of the Pharmaceutical Council. A discussion occurred respecting the appointment of examiners for the ensuing year, which seemed to indicate a desire on the part of some of the members of the Council to replace certain of the present board by more efficient examiners. Mr. Schacht very properly pointed out that an examining board should be reformed, if such reformation were necessary, by very gradual steps, as undoubtedly the tact of examining could only be gained after some years of experience. At the same time it was evident that a long established examiner was liable to fall into grooves which would leave him at the mercy of the superficial examinee. It was resolved that all names suggested for the board should be given in by the 23rd instant, and that at the next meeting the Council should select such a list as should seem most desirable.

At the Pharmaceutical meeting on November 4 a discussion respecting the nomenclature to be adopted in the possible International Pharmacopœia was introduced by Mr. Greenish. The discussion and the subject generally is very fully treated on subsequent pages in an article from the pen of Mr. Ince. After that a lively discussion on the pharmaceutical merits of "amorphous" phosphorus was introduced by a Paper from Mr. A. W. Postans. The author found that in this form phosphorus could be easily manipulated into pills, powders, lozenges, &c. Mr. Mackay intimated that the harmless qualities of amorphous phosphorus possibly disqualified it for therapeutic purposes, and Dr. Redwood energetically defended the Pharmacopœia process for phosphorus pills, and also brought forward again the phosphorated oil emulsion which he had recommended on a former occasion (see THE CHEMIST AND DRUGGIST, June, 1874) as an elegant method of administering the remedy.

A small supply of the new medicine, Jaborandi, whose wonderful diaphoretic properties were first mentioned in English in this journal, has been received in Paris. Mr. Martindale has obtained a specimen, and, in conjunction with Dr. Ringer, has experimented with it on two boys at University College Hospital. The physiologic effects corresponded very closely with those reported from Paris.

The Imperial Treasury of Berlin deserves the glory of old attaching to the elephant's trunk—so strong that it will root up trees, and so delicate that it can pick up a pin. The fastidious distinctions between drugs which may be dealt in by "druggists" and those which are to be handled by "apothecaries" only may indicate a very high state of civilisation, and not a few of our readers have often expressed a desire that the British Government would protect trade here in a similar manner. A strange change will have to come over the spirit of our legislature before such a result occurs. Why on earth the German Government should object to the prompt reporting of such an innocent commission as that of which our Berlin correspondent gives us the history passes our understanding; but so it is, and we have reason to believe that our account will be the first published in the world. It appears at the risk of Prince Bismark's displeasure.

A very singular case of apparent narcotic poisoning has lately occurred at Romford. Four children, aged respectively 10 months, 15 months, 19 months, and 25 months, all died on October 29, with similar symptoms, and to each had previously been administered a teething powder, or portion of one, purchased from the shop of Mr. Lasham, chemist, of Romford. A long enquiry took place before the Coroner, and the jury ultimately agreed to the following verdict:—"That the deceased children died from the effects of narcotic poison; such poison was contained in powders purchased at Mr. Lasham's establishment, but there was no evidence to show by whom the powders were prepared." The coincidences we have mentioned undoubtedly seemed to point to such a verdict, but the intermediate evidence was curiously inconclusive. Mr. Lasham himself was away from home. A stock of teething powders was kept in a drawer, of which the ingredients were in each:—Calomel, 1 grain, Dover's powder and compound powder of tragacanth, of each 1½ grain. The powders were supplied from this stock, and it was not shown that there had been any variation in the composition from that which Mr. Lasham's assistant had stated. Two surgeons had made *post-mortem* examinations of the stomachs of the children without finding any marked evidence of narcotic poisoning, and Mr. Henry Medlock, analytical chemist, had expressly tested one of the powders for morphia, but without any more certain result than that there might be some opium or morphia present. Neither the assistant nor the apprentice had any recollection of the preparation of these powders.

The firm of Crook & Co., advertising agents, with whom Mr. Curtis, of Baker Street, recently came into collision, have [failed] in an action which they brought against another firm of chemists—Messrs. Steel & Marsh, of Bath. The latter had given them an order to insert an advertisement of "Stomach Pills" in over 200 almanacs, directories, &c., but ascertaining that the advertisements did not appear in a number of these almanacs, Messrs. Steel & Marsh very naturally refused to pay the bill which was sent them by "Crook & Co.," and now sued for. An indication of the line of defence thrown out by the counsel for the defendants, Mr. Huddleston, occasioned a sudden collapse of the case, the plaintiff electing to be nonsuited. We are informed that one or two similar cases with advertising chemists are pending, and we shall be glad to have particulars.

Some of the members of the Liverpool Chemists' Association are reported (in the *Pharmaceutical Journal*) to have taken exception to the summary of the affairs of the society published in our last issue, on the ground that the statements contained therein were inaccurate. Dr. Symes writes us a history of the difficulties from his point of view, while Dr. Cook, in a totally different tone, denies the correctness of our history as far as he is concerned. What we said of him, we may add, was simply a statement of fact, the accuracy or inaccuracy of which is known to every member of the Association.

Mr. Alfred H. Mason, F.C.S., the newly-elected President of the Liverpool Chemists' Association, delivered his opening address on the 22nd inst., and gave a comprehensive survey of the year's pharmaceutical progress. At the commencement of his address Mr. Mason went out of his way to remark that "pharmacy is not a trade." May we ask, therefore, by what is it that the Liverpool pharmacists get a living?

Mr. Siebold has undertaken to give a course of six lectures gratuitously to the Manchester Chemists' Association during the winter on "The Analysis of Common Articles of Food and Drink."

The Chemists' Society of Ireland have inaugurated educational classes in view of pending legislation.

The death of Dr. Lankester, the well-known coroner for Central Middlesex, at the age of 61, is a loss to London which will not easily be repaired. His industry and vigour in that office will always be remembered to his honour, especially the energetic manner in which he pressed on the enquiry into the baby-farming crimes which a few years ago disgraced our civilisation. Nor will his services in popularising scientific information be readily forgotten.

The total amount raised by the Hospital Saturday Fund amounted to 5,800*l*. The expense of collecting this small sum reached no less than 1,100*l*. The first year of Hospital Sunday in London produced upwards of 27,000*l*., at a cost of 750*l*. The result is a severe rebuke, and a well-deserved one, to those who, in the sacred name of charity, sought to gain a partisan triumph.

Amongst the literary events of the month must be mentioned the production of a new work called "Pharmacographia," by Professor F. A. Flückiger and Daniel Hanbury, F.R.S. It is, as the name imports, a writing about pharmacy, and includes a history of the principal drugs of vegetable origin met with in Great Britain and British India. The names of the joint authors entitle it to unusual consideration. Mr. Peter Squire likewise publishes the tenth edition of his "Companion to the British Pharmacopœia." The volume is adapted to the latest edition of the official compilation, comparing the strength of its preparations with those of the United States and other foreign pharmacopœias.

The stamp duty on patent medicines in the year ended the March 31 last amounted to 99,807*l*. 11*s*. 1*d*., and in net 95,388*l*. 6*s*. 10½*d*., while the year's duty on medicine vendors amounted to 7,378*l*. 15*s*.

The next meeting of the Chemical Society will be held on the 19th inst., when the following papers will be read:—"On the Action of Organic Acids and their Anhydrides on the Natural Alkaloids," Part II., by G. H. Beckett and Dr. Wright; "On the General Equations of Chemical Reactions," by W. K. Clifford; "On Propionic Coumarin and some of its Derivatives," by W. H. Perkin; "Action of Bromine on Protocatechuic Acid, Gallic Acid, and Tannin," by Dr. Stenhouse; "On the Composition of Autunite," by A. H. Church.

Quicksilver is now quoted at 25*l*. per bottle, and is still mounting. Chilian iodine is now on the market in considerable quantity, and seems likely to prove a useful check on the extravagant prices which the combination of makers here has at times forced from buyers.

TRANSATLANTIC SKETCHES.

THE prosperity of the patent medicine trade of America has often been remarked upon, and the wealth accumulated by some of the proprietors of the specialities there has sometimes excited both envy and wonder. The peculiar circumstances of the country have liberally aided the enterprise of the promoters of this class of merchandise, and it is possible that in future it will be found an altogether different task to duplicate the successes already achieved. Without entering on any questions of social economy, however, and equally avoiding the ethical aspects of the patent medicine trade, it may be of interest to cull from its records a few instances regarded purely from a commercial point of view:—

Dr. J. C. Ayer, of Lowell, Massachusetts.

In this gentleman we have the most prominent personage among the proprietors of patent medicines to-day in America; whether or no he is legitimately entitled to the prefix the writer is unable to say. It is, however, industriously affixed to all printed matter emanating from his "laboratory," even to the headings of letters and invoices. About the year 1850 the "Doctor" began to be heard of as a "first-class" retail chemist and druggist in the town of Lowell—the Manchester of America. His "Cherry Pectoral" was the latest "discovery" for coughs, colds, and consumption, in which the Northern States of the Union abound. Discarding the old-fashioned method of pushing similar preparations, Dr. Ayer gradually brought his very elegant compound under the notice of the "upper ten" through the agency of one first-class chemist in each interior city and large country town, thus availing himself of the *prestige* of the best class of the chemists, and acquiring slowly but surely in the outset a footing only obtained by other speciality proprietors after years of effort. Later on, as we shall see, the Doctor appealed to the "body of the people," and with splendidly successful results.

Supplementing these initial efforts with a high-toned style of publicity in the very best journals, carefully avoiding the exaggerated style of puffery prevalent up to the period of his advent, Doctor Ayer succeeded in establishing his "remedy" upon a flourishing basis, and with his first success seems to have come a further ambition for gain or glory. Notwithstanding the paling reputation of the "sarsaparillas" he launched one under the title of "Ayer's Sarsaparilla," claiming to be "highly concentrated," and put up in comparatively small bottles. Coming as they did in competition with the gigantic *quarts* of the "original S. P. Townsend's," "Old Doctor Jacob

Townsend's," and "Sands'," as well as the *half-gallon* bottles of "Bristol," all sold retail at one dollar—this was a bold enterprise on the part of Dr. Ayer.

The immediate decline in the sales of the other preparations testified to the business intelligence of the subject of our sketch, while his preparation remains to-day the one having the leading position and sale in America. Apparently anxious to establish business with all sections, Dr. Ayer some years after the launching of his sarsaparilla placed before the Southern and Western public his "fever and ague remedy," which, owing to his widely extended business relations, at once went into general use. Then he inaugurated his "pill." No patent medicine man's ambition seems to be satisfied in America without the introduction of a "pill." The doctor floated his into public notice in a very insidious way. Each of the *fifty thousand* medical practitioners in the Union received by post a sample box, and this feat was duly chronicled in the first advertisements of the new "pill." Whether the profession endorsed them or not in compliance with the evident suggestion will never be known; but the product went into a most extensive sale within the current year, equalling perhaps that of the old pioneers, Jayne, Wright, Herrick, and Brandreth.

The returns from these various ventures brought Doctor Ayer an immense income, estimated by some as high as 50,000*l*. per annum, and his accumulated fortune cannot be estimated at less than 1,000,000*l*. sterling. Lowell has conferred, we believe, its mayoralty upon him, and generally he is esteemed a model business man, having, perhaps, but one flaw in his armour—viz., the origination, propagation and sale of "patent medicines."

B. A. FAHNESTOCK, OF PITTSBURG, PENNSYLVANIA.

A little less than fifty years since, the honourable subject of this sketch commenced the wholesale and retail drug trade in the little town of Pittsburg, situated on the extreme western border of the State founded by William Penn. This American Sheffield is to-day an important manufacturing and commercial point equi-distant from the Atlantic sea-board and the metropolis of the Mississippi valley.

Pittsburg and Fahnestock advanced to fame and fortune together. Our druggist *pioneered* a "speciality" into the front rank, as we shall briefly sketch.

Publicity seems to have been the keynote to Fahnestock's success. His life-venture was the renowned "Vermifuge" upon the sale of which so many thousand pounds' profit have been reaped in subsequent years. All over the globe, except in Europe, the enterprising druggist made known his preparation. With the acquirement of wealth, the Vermifuge was permitted to "go on its own merits," all advertising being discontinued, or nearly so, and notwithstanding a vigorous competition inaugurated by another Fahnestock as well as other Pittsburg druggists, the "original B. A." kept its position with the trade and public, and does so to the present time.

Mr. Fahnestock gradually developed his drug business until it became one of the most extensive west of New York. He also established a branch house in the City of New York, and a manufactory of white lead at Pittsburg. These enterprises are worthily continued by his junior associates—the subject of our lines having met his death in a steamboat explosion on the Ohio river some five years since. He left an immense fortune, an established business, and, best of all, a good name behind him.

F. C. WELLS, OF NEW YORK.

The "Mather" of the American metropolis—British by birth—cosmopolite by nature, a *believer* in plasters, of which his firm have been for years large manufacturers. The genial nature of the man endeared him to the entire drug trade of New York.

Mr. Wells, from a very humble beginning, created one of the first and best known wholesale patent medicine houses in the Union. Although distanced somewhat in after times by houses more powerfully organised in the way of capital, he always kept a good rank in the trade struggle, *malgré* numerous vicissitudes. The liberal manner in which "Wells" sustained unknown beginners in the field of specialities is well known in America—often to the detriment of his business interests. Aided by obliging and intelligent associates, he has been able to keep a leading position in "patents" down to the present day, and is as well the largest manufacturer of machine-spread plasters, "officinal" and other, for the wholesale trade in the United States.

DONALD KENNEDY, OF ROXBURG, MASSACHUSETTS.

A substantial, clear-headed, and matter-of-fact business man, who has from an insignificant beginning attained an undoubted success.

Kennedy's medical discovery has been established in its present position by the untiring *personal* efforts of its proprietor. Without pausing to comment upon the somewhat old-fashioned style of advertisements and prospectuses adopted by Mr. Kennedy, which appealed mainly to the less educated classes, we may pay a just compliment to the common sense way in which he has managed his business and to his large views, which have aided in securing for his "discovery"—"Ointment," and other remedies—their large and profitable sale. Kennedy, like Perry Davis, believed in the efficacy of travelling among the trade, and keeping them well interested in his preparations by his personal influence. Several times in each year he called upon the dealers in the largest cities and towns, not so much for the soliciting of orders as for the purpose of raising and sustaining their interest in his remedies. His income is now large, and his accumulations during the last fifteen years place him among the wealthiest of the American Patent Medicine Nabobs. We had the pleasure of seeing him during his late tour in Europe, and observed that his prosperity sits well upon him.

THE BROTHERS SANDS, OF NEW YORK.

The Cheeryble brothers of the American drug trade. For years the firm of A. B. and D. Sands have been in full view as models in the management of various specialities, as well as of a general wholesale drug business. Sons of Quaker parents in old Dutchers County, New York, these gentlemen supplemented an insignificant retail drug business in the metropolis by the establishment of several patent remedies, among which "Sands' Sarsaparilla" for years occupied the foremost position. The foundation of the grand fortunes left behind them by this firm (both having died within the past few years) was laid upon the profits of this preparation. For years they struggled against the *quart-bottle* move, started by S. P. Townsend, but finally acquiesced. Other patents have received the patronage of this house, among which is one of immense sale, viz., McMunn's Elixir of Opium. Their business is continued by their sons and other parties under the original style by express desire of the elders previous to their decease. As systematic business men of strict commercial integrity, these gentlemen have always been conspicuous, and their fame survives them.

CAMOMILE.

INTERMIXED with the lavender and peppermint, the camomile forms a strange contrast to the purples and dark greens with its tiny blossom of shining white tinged with gold. The London clay is very favourable to the growth of this flower, although it occurs also in gravelly soils at Mitcham and the neighbourhood, but generally in positions where the surface is heavy. The labour entailed upon the cultivator by this little plant is not very great, as it flourishes with an ordinary share of attention. According to the "Hortus Kewensis" there are twenty varieties known to the English gardener, one-fourth of which are native plants, and the kind most esteemed for medicinal purposes can be found in abundance upon many of our commons. In some parts of Britain it is indigenous, growing generally in gravelly pastures with various grasses, forming a thick sward whereon cattle feed greedily, especially sheep. In such places it appears to be an important ingredient in the turf, and as it bears the scythe admirably it is also an excellent plant for lawns that require to be kept very fine. The peasantry have conceived a very high opinion respecting the admirable qualities of the camomile, and in many localities, at the end of their little gardens, they have what they call a camomile seat, which is constructed by cutting a bank of earth and planting it thickly with the double variety of this plant: here they delight to sit, and fancy by so doing that it is conducive to health.

The plant was known to the Greeks, and obtained the name that it now bears, which is expressive of its peculiar smell. It is the *Anthemis* of Dioscorides and Theophrastus. Pliny, who speaks in high terms of its qualities, mentions that the first person who appeared to have praised and recommended this herb in medicine was rewarded by living to a very advanced age without ever knowing a day's illness. Asclepiades held the camomile in equal estimation, and, being the founder of a sect at Rome, his advice was followed by the people, who preserved the dry flowers both for medicine as well as using them for their winter garlands.

There are two kinds, the single, which is grown for its aromatic qualities, and the double for its superior beauty. At the commencement of the season a few flowers, single or nearly so, are found on plants which, at a later period of the year yield only double flowers. The result apparently depends in part upon the mode of cultivation, which is conducted habitually without reference to this particular object, and in part, probably, from other less obvious influences. The single flowers are more odoriferous, and yield a larger proportion of volatile oil, especially those called Scotch camomile. The active matter is almost wholly confined to the yellow disc, and as the single have very large discs, and the double very small ones, and when very double scarcely any at all, it is evident that the latter cannot be equivalent to the former unless taken in much greater quantity, and therefore the single or large disc flowers are the best to employ in medicinal uses. The true camomile has a prostrate stem and long fibrous perennial roots. Its leaves are finely cut, always more or less hairy, and possessing a strong aromatic odour. Both the single and the double are propagated in the same manner, that is, by parting the roots, or by slits of the rooted offsets, or of the runners. It is necessary to detach these from the roots in little tufty sets during the months of March, April, and May, and then to plant them in rows about one foot apart, giving them repeated waterings until they take root. With this treatment, under favourable circumstances, the plants will soon overspread the bed, and produce an abundance of flowers in the following July and August, and so remain productive for several years. March is the best time for planting, but occasionally they are planted in the autumn. The crop is in perfection about July, and continues to yield, more or less, until September, and sometimes as late as October: the period, however, varies according to the seasons. Either extreme of wet or dry weather is injurious to the camomile. It is most productive when grown in rather heavy soil; a stiffish black loam suits the plants better than a light sandy soil, which latter causes them to become weak. They are benefited by changing the ground every two or three years, and if over manured they run to stem and leaf, and the crop of flowers becomes less abundant. The flowers should be gathered when fully expanded, choosing rather a dry day, and when gathered laid thinly on a piece of clean canvas in a dry, airy, partially shady place for a day or two; afterwards placed in a warm apartment to dry thoroughly; after which they should be placed in paper bags, or better still in wide-mouthed bottles, tightly corked, and there kept for use. The average crop per acre is six cwt., but the range is from three to ten cwt. The single flowers are by weight more productive than the double, but the price being lower the value of the crop is about the same. The flowers which supply the English market are grown chiefly at Mitcham, in Surrey, and in Derbyshire.

There are two kinds of double camomile cultivated at Mitcham, one yielding the ordinary yellowish oil, the other, which is called the new sort, a blue oil: they are not distinguishable except from a slight difference in the leaf, the one being more developed than the other. It is said that 100 lbs. of dried flowers (single) yield upon an average 2 lbs. 12 ozs. of oil and 3 lbs. 4 ozs. of pharmaceutical extract. The oil is generally distilled from the entire plant, not from the flowers only, as directed in the Pharmacopœia. By keeping, this blue oil changes its colour, and becomes the usual yellowish or brownish-yellow colour. The flowers which yield this, although fine in appearance when fresh, are liable to change colour by keeping; they are therefore less adapted for sale in the market than they are for distillation. The flowers give out their virtues both to water and rectified spirits. When the flowers are dried and powdered, the infusions are more grateful than from the fresh or but moderately dried. Distilled with water, an essential oil in small quantities is obtained. of a greenish colour, and strong pungent taste. Rectified spirit also extracts and in some degree conceals the odour of this oil, and the bitter taste of the tincture is stronger than that of the watery infusions.

The properties of the camomile have long been known to medical science. The constituents of the flowers are a volatile oil, a bitter principle, resin, and a small quantity of tannin, and it is supposed that the two first are the bases of the active principles. Camomiles are an exceedingly useful stomachic and tonic in dyspepsia, with a languid and enfeebled state of the stomach and general debility. As a remedy for intermittents, though they have gained considerable celebrity, they are inferior to many other medicines. The oil is sometimes used to relieve flatulency and griping pains, and the warm infusion is employed as an emetic. A species of camomile, *Anthemis tinctoria*, is raised in France for the sake of the brilliant yellow dye which is obtained from the plant.

COUMARINE.

By a Village Pharmacist.

THIS fragrant resinous principle is very widely diffused in the vegetable kingdom. Unlike most others, it is not confined to any particular species, or even to any special natural family. In the form of vapour it rapidly diffuses itself through the atmosphere, and in this state has a powerful effect upon the brain of many persons. It is supposed, not without good foundation, to be the chief cause of hay fever. It occurs abundantly in two of our common British plants, viz., *Anthoxanthum odoratum*, a graminaceous species, and *Melilotus officinalis*, a leguminous plant. The first-named is a grass abundant in most pasture fields, and the chief ingredient in hay. When the hay grass is drying in the meadows it gives out a peculiar fragrance, well known as the scent of new-mown hay. The theory is that it is this odour which causes the dreaded hay fever. I have noticed in wet or damp seasons the hay fever is almost unknown, but makes its appearance most commonly in dry hot weather, when the coumarine is readily taken up by the hot surrounding atmosphere. I have also observed that if a large bundle of the melilot is taken into a dwelling house and allowed to dry, as it is sometimes in the houses of our village herbalists, it will cause some of the inmates to be prostrated by what is supposed to be a mild form of influenza, but which is in reality the hay fever.

As stated above, coumarine is found in many plants, and, strange to say, most of the species in which it occurs are very peculiar plants, unlike others of the same natural order. Thus, the *Anthoxanthum odoratum*, which is now placed amongst the Graminæ, is different from all other known British grasses in that it is diandrous; all our other grasses are triandrous. Linnæus placed it with the "Diandria trygynia." Coumarine also occurs in the tonquin bean (*Dipterix odorata*), which is a large tree of Cayenne, belonging to the Leguminosæ, but differing widely from all the plants of this large family by having a drupaceous fruit, the calyx two-lipped, the upper lip consisting of two large lobes spreading like wings, the stamens united in a sheath, split on the upper side. The Faham tea plant of the Mauritius (*Angræcum fragrans*), an orchidaceous plant, yields coumarine, and here again the flowers are of an extraordinary shape. The sweet-scented woodruffe (*Asperula odorata*) is another source. This plant belongs to the Rubiaceæ, but differs from many of the allied species in not having rough or spiny leaves and stems. Its fragrant perfume often leads village people to dry the sweet-scented woodruffe, and to place some with their Sunday clothes. Formerly it was used to scent tea.

We therefore find coumarine in the following natural orders:—Rubiaceæ, Orchidaceæ, Graminæ, and Leguminosæ. It is interesting to observe that the same odorous principle which has secured such sentimental fame for our hay-fields is employed to scent snuff, give the agreeable odour to sachets, and to flavour tea and cheese, though each time extracted from a different species. Snuff is scented by powdered tonquin beans: and the celebrated Switz cheese or Schabzieger cheese is flavoured with coumarine, imparted by the blue melilot (*Melilotus cærulea*). Other kinds of cheese are also flavoured with the melilot.

Coumarine, or the camphor or stearoptene of the tonquin bean, is a concrete essence, the formula $C_{18}H_6O_4$. By the addition of potash it is changed into cumaric acid ($C_{18}H_7O_5HO$); this afterwards changes into salicylic acid ($C_{14}H_5O_4$). By using hot nitric acid it is converted into nitro-picric acid; on the other hand, if pure cold nitric acid be employed, a white crystalline solid is produced, represented by the formula, $C_{18}\left\{\begin{matrix}H_5\\NO_4\end{matrix}\right\}O_4$.

Yellow crystals are produced by a combination with chloride of antimony, and make a pretty polariscopic object. The most interesting chemical compound formed with coumarine is salicylic acid.

Coumarine is increasing in favour as a perfume, and will become exceedingly valuable as a commercial product. At present the chief source is the tonquin bean. The finest quality of the bean can be purchased for about three shillings per pound; it might, therefore, be profitable for a chemist to endeavour to produce it from one of our native species. The *Anthoxanthum* would yield it quite as pure as the tonquin bean, and, so far as the perfumer is concerned, it can be used in the raw state to make the spirituous perfume commonly known as "new-mown hay" just as well as from the bean. Our homœopathic friends are preparing tinctures, pilules, and globules from the dried flower heads, of course first prepared as a strong tincture with alcohol.

I believe, however, the *Melilotus officinalis* would yield coumarine in a much purer form than even the sweet vernal grass, although not in as large quantity. Considered from any standpoint, it is worth a trial, for any quantity of the dried herbs could be procured at a very cheap rate.

THE FATHER OF ALCHEMY.*

If we consult alchemical MSS., no matter the date or author, or language, we find constant mention of Hermes Trismegistus, who was indeed considered, and sometimes designated, the *father of alchemy*. In a treatise attributed to Albertus Magnus we are told that the tomb of Hermes was discovered by Alexander the Great, in a cave near Hebron. In this was found a slab of emerald, which had been taken from the hands of the dead Hermes by Sarah, the wife of Abraham, and which had inscribed upon it in Phœnician characters the precepts of the great master concerning the art of making gold. The inscription consisted of thirteen sentences, and is to be found in numerous alchemical works. It is for the most part quite unintelligible, and in style closely resembles the great mass of Middle Age alchemical literature.

The following is cited as the inscription of the "Smaragdine Table," and is to be found in very early MSS. in various languages:—

1. I speak not fictitious things, but that which is certain and most true.
2. What is below is like that which is above, and what is above is like that which is below, to accomplish the miracles of one thing.
3. And as all things were produced by the one word of one Being, so all things were produced from this one thing by adaptation.
4. Its father is the sun, its mother the moon; the wind carries it in its belly, its nurse is the earth.
5. It is the father of all perfection throughout the world.
6. The power is vigorous if it be changed into earth.
7. Separate the earth from the fire, the subtle from the gross, acting prudently and with judgment.
8. Ascend with the greatest sagacity from the earth to heaven, and then again descend to the earth, and unite together the powers of things superior and things inferior. Thus you will obtain the glory of the whole world, and obscurity will fly far away from you.
9. This has more fortitude than fortitude itself; because it conquers every subtle thing and can penetrate every solid.
10. Thus was the world formed.
11. Hence proceed wonders, which are here established.
12. Therefore I am called Hermes Trismegistus, having three parts of the philosophy of the whole world.
13. That which I had to say concerning the operation of the sun is completed.

The story and the inscription, together with all books attributed to Hermes (who is asserted to have lived about 2,000 B.C.), are no doubt the production of monks of the Middle Ages. In spite of the obvious worthlessness of the inscription of the emerald table, men have not been wanting who have laboured long and lovingly to prove its authenticity, to interpret it, and to show that it is in good sooth a marvellous revelation, full of sublime secrets of considerable import to mankind.

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* From Rodwell's "Birth of Chemistry."

Conducted by Richard J. Moss, F.C.S.

In accordance with the announcement made in our September number, the next exercise will also be on morphia and its salts. We intend to distribute packets of coloured sugar which may contain a small quantity of opium, or of morphia, either uncombined or as chloride or acetate. The sugar is to be examined for these substances, and chemical evidence produced proving either the absence of all, or the presence of one of the above-mentioned compounds.

Students who wish to compete should send us their names and addresses before the 20th instant. On the 25th, we shall forward the samples.

Students' papers will be received up to the 15th of the following month.

Answers.

The sugar distributed for analysis in September contained 2·5 per cent. of *Morphiæ Hydrochloras*, B.P. This is a large proportion, considering the very active properties of the salt, and also that morphia is one of the most easily detected of the organic bases. There are not many failures to complain of this time, but still the sort of success that has attended the labours of our young friends is not altogether satisfactory. This partly arises from the fact that the quantity of morphia present was sufficiently large to make the search for it quite easy. The alkaloid was detected by every one of the twenty-two students whose papers we have examined, and only two missed the acidulous radical. But, in most cases, the methods adopted were such as would not have been satisfactory if a smaller proportion of the morphia salt had been present, or if the morphia had existed in a different state of combination. The merits of an analysis are not judged merely by the correctness of the conclusion arrived at; but also, to a large degree, by the analytical methods adopted, and the way in which they are carried out. It was taken for granted in too many cases that the chemical properties of the sugar and its impurities might be disregarded. Sugar of an inferior quality was intentionally employed, in order that the colour might mask the opium which might possibly be present, as well as place other difficulties in the way. It is scarcely necessary to observe that the impurities of such sugar are not always limited to colouring matter. The original sugar in this case gave decided indications of the presence of chlorides, so that those who examined the aqueous solution of the mixture do not deserve much credit for having detected the hydrochloric radical. This was one difficulty in the analysis which only two or three students appreciated. The secret of overcoming the difficulty consisted in separating the morphia salt from the sugar as effectually as possible. At present, we leave students to find out how this should be done, as it is a problem directly bearing on the next analysis. There are some hints to be found in the remarks to correspondents, which, it must be remembered, are intended for the benefit of others, as well as those to whom they are especially addressed.

We may mention that amyl alcohol (the chief constituent of fusel oil) is an excellent solvent for morphia, especially when warm, and that the salts of morphia are not soluble in it, nor does it dissolve sugar. This re-agent has also the advantage of not being miscible with water. In working with amyl alcohol, it is well to avoid the vapour of it, as it has the effect of making some persons feel rather uncomfortable. Uslar & Erdmann's method for the detection of the alkaloids depends upon the use of amyl alcohol. This method is described in Fresenius's "Qualitative Analysis."

PRIZES.

The First Prize for the best analysis has been awarded to
HENRY J. JACKSON, 11 Prince Street, Bridlington Quay.

The Second Prize has been awarded to
J. ABERNETHY (Tonto), 7 Corn Market, Belfast.

Marks Awarded for Analyses.

H. J. Jackson (*1st prize*)	90
Tonto (*2nd prize*)	80
T. T.	85
Concordia	84
B. Brook	84
M. M.	83
C. J. M.	82
S. J. Watson	82
Enitar	80
W. A. B.	80
Waverley	80
F. Williams, jun.	78
F. L.	76
D. Hayward	76
W. J. P.	75
C. A. B.	75
C. W. H.	75
H.	75
J. Beech, junr.	60
H. C. Corke	43
J. Bardsley	30
J. G., Glasgow	25

TO CORRESPONDENTS.

*** All Communications should include the names and addresses of the writers.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

B. Brook.—Of course you are at liberty to seek for any number of acidulous radicals in addition to those which may possibly be present, but it is not necessary to send us an account of this superfluous work.

C. J. M.—After treating the mixture with alcohol, it was a mistake to apply heat, because the proportion of morphia salt present was so small compared with the sugar that cold alcohol easily dissolved the greater part of it. By warming the alcohol an additional quantity of sugar was dissolved. A fluid ounce of boiling absolute alcohol dissolves about four grains of sugar, which séparates almost entirely on cooling. The same quantity of boiling proof spirit dissolves about 90 grains of sugar; on cooling, a comparatively small portion is retained in solution.

Enitar.—You appear to have considered that the proportion of sugar was immaterial so far as the morphia reactions were concerned. This requires some proof.

W. A. B.—Pure zinc does not leave a residue when dissolved in dilute sulphuric acid. The black residue which commercial zinc leaves consists of foreign matter, which varies with the source and quality of the zinc. Tin, lead, sulphur, and carbon, are said to be the chief constituents of this black substance.

Waverley.—Ether is a bad solvent for morphia. The salts of morphia are considered to be insoluble in ether.

F. Williams, Junr.—The weakest point in your paper is the detection of the acidulous radical. Your evidence is just as strong in favour of the acetic as of the hydrochloric radical.

C. W. H.—It would probably save you some trouble if we were to describe the process which you should follow, but this is just what we wish not to do. It will be to your advantage to acquire the necessary information by a proper study of the subject. In this study it is our wish to direct you. You did not take the hint about solvents.

H.—Next time endeavour to imagine that a life is depending upon your analysis. This scientific use of the imagination may induce you to demand a more substantial foundation of facts upon which to base your conclusions.

J. Beech, Junr.—The short account of your analysis does not show very satisfactorily your reasons for concluding that morphia hydrochlorate was present. You did not prove that the silver nitrate precipitate consisted of chloride.

J. Bardsley.—Uslar & Erdmann's method, which you followed, had no special advantage to offer in this case, for it does not enable one to isolate the salts of morphia from foreign matter, as they are insoluble in amyl alcohol. The alkaloid must be separated in an uncombined state, and when this is necessary or desirable amyl alcohol is a valuable re-agent.

J. G., Glasgow.—Having tried your experiments, we are at a loss to understand why you made some of your statements, which we are obliged to contradict. The silver nitrate precipitate was insoluble in nitric acid. The mercurous nitrate precipitate was insoluble in boiling water. Had this precipitate been due to acetic acid, boiling with water would have resulted in the separation of metallic mercury. It consisted of mercurous chloride, and when you added ammonia it was converted into the black compound Hg_2H_2NCl. The blackening of the precipitate had, therefore, nothing to do with acetic acid.

GERMANY.

THE NEW LEGISLATION.

(FROM OUR OWN CORRESPONDENT.)

BERLIN, November, 1874.

We may note that the report of the Berlin Commission given in this letter will be the first which has appeared in print either in this country or Germany, the Imperial Treasury having especially requested that none should be published until fourteen days after the conclusion of the session.

⁂

In the German Empire great things were prepared for the pharmacy legislation. So at least was generally believed for some weeks beforehand, and one was justified in cherishing great hopes, especially as all proceedings on the part of the Empire were carefully concealed.

And now! *Parturiunt montes nascitur ridiculus mus.* For ten days the representatives of the apothecary interest from all the German provinces laboured most earnestly to offer the Treasury a basis for those pharmacy laws required by the Reichstag, and now the Bundrath declares that the Treasury is not able to find sufficient material for legislative propositions in the results of the conferences.

What does this mean? Either things are to remain as before (save some trifling modifications), and in favour of this appears to be a contemporaneous invitation to a further commission of apothecaries and druggists to consult upon the regulations concerning the trade in medicines, in respect to which details will be given further on; or free trade pure and simple which, however, is opposed by the late commission.

The protocols of the First Commission of Inquiry are now published. The members were not able to felicitate themselves upon a better condition of things than exists in France and England, nor were they able to consider as of any value or desirable the condition of things pourtrayed as existing now in Alsace.

There was nothing new said; most of the references were to the acknowledged circumstances, and were largely directed to the opprobrium of secret remedies, &c. Very little progress was made towards the appointment of a sub-commission to consider the revision of the tests applied by agents of the State.

In consequence of a conviction that the new ordering of pharmaceutical relationships in Germany was not opportune, the Treasury convoked another commission, which was required to deliver its opinion (as experts) upon the regulation of the trade in medicinal substances.

This was held in Berlin from the 26th to the 30th November, and consisted of five Prussian apothecaries, three from the old and two from the new provinces, one from Baden, one from Bavaria, one from Saxony, one from Wurtemberg, and two retail druggists of Berlin, one from Hamburg, one from Brunswick, and one from Saxony, and also two wholesale druggists from Berlin, and one from Leipsic.

An absolutely marvellous appetite for work exists in the Treasury, the members of the commission sitting from ten o'clock in the morning until three in the afternoon, and again from five until nine in the evening, voluntary State prisoners, like the Pope and a few German bishops.

It is probable that as a result of the commission the preparation and sale of the following medicines will be declared to be confined to apothecaries:—1. Mixed medicinal balsams; 2. Gelatinous capsules; 3. Medicine decoctions; 4. Medicine conserves; 5. Medicine elixirs; 6. Plasters (except English ones); 7. Extracts (except malt and fresh ditto); 8. Infusions; 9. Liniments (except arnica and opodeldoc); 10. Lotions and liquid preparations for internal and external use (except artificial mineral waters, Hoffman's drops, spirits of camphor, and spirits of soap); 11. Medicinal pastilles (except peppermint drops); 12. Pills; 13. Mixed medicinal powders; 14. Mixtures of crushed substances (excepting wood and herb teas of the German Pharmacopœia); 15. Medicinal syrups (except fruit syrups and white sugar syrup); 16. Fluid ether spirit and wine medical extracts (except myrrh and bergamot), and also essences for the preparation of spirituous drinks; 17. Medical ointments (except lip salve and cold creams). The following drugs and chemical preparations will be declared free—cortex frangulæ, flores arnicæ, fruct phellandin, lupulin, myrrh, lignum guaiaci, lignum quassiæ, lignum sassafras, sulphate of magnesia, phosphate, nitrate, and sulphate of soda, castor oil, marshmallow, liquorice, angelica, valerian and a few other roots, and precipitated sulphur.

Very lively debates took place about declaring these things free, and also upon those preparations above distinguished as exceptions. It was suggested that dealers not under State control should only be permitted to supply the article in question when it was required for technical and not for medicinal purposes.

Such measures would be hardly intelligible to the English public, unless it were explained that in Germany until now the sale of medicaments has been, according to law, wholly in the hands of apothecaries; but that in consequence of an inadequate supply of apothecaries there has arisen, especially in the country, a body of petty shopkeepers, who do not really reflect whether they are supplying what is wanted, or whether their medicine will have the desired effect, or, indeed, whether it will have any effect whatever.

In addition to the things quoted, some others were declared free and afterwards withdrawn. It was also resolved that dealing in poisons and the trade in veterinary medicines should be arranged by the State, and that it was considered, with these modifications, German pharmacy might be trusted to progress regularly for some time to come.

LEECHES FOR THE FRENCH ARMY.

THE number of leeches required for the French army hospitals exceeds 100,000 per annum. The supply for the next three years is about being contracted for, at an average price of 125 to 135 francs the thousand.

A special commission is charged with the care of receiving the leeches from the contractors and verifying the number and quality. They must be of the kind denominated *vertes* (green), or *grises* (grey) from either France or Hungary, or of the description called *dragon*, from Algeria.

After being counted, they are placed on a horse-hair sieve to drain; the largest ones are taken one by one and made to disgorge, as they are not accepted when they contain more than fifteen per cent. of their weight in blood.

After this operation, the leeches are weighed; a thousand should reach 1,750 grammes, while their individual weight should be, for the smallest, one and a-half grammes, and for the largest, not over two grammes.

Taking as a basis of cost 130 francs the thousand, the total of the three years' contract should reach nearly 40,000 francs.

The deliveries are required to be made at Paris, Châlons-sur-Marne, Bordeaux and Marseilles, according to the wants of the various hospitals.

THE EUCALYPTUS.

WE find a great deal of information respecting the character and valuable properties of the Eucalyptus and its products in a paper read before the Melbourne Royal Society at its August meeting, by Mr. Bosisto. The lecturer especially discussed the question whether Eucalyptus was a fever-destroying tree.

He remarked that in many places on the Continent and elsewhere experiments had been made to acclimatise the Eucalypti, more especially the blue-gum species. The rapidity of its growth, its early maturity to a forest tree, together with the power to absorb considerable moisture, and to permeate the air with its peculiar odour, led to the belief that the tree, attractive in itself, exerted a beneficial influence upon malarious districts. In the consideration of the question whether the Eucalypti tended to destroy miasmatic poison or to lessen malaria, it was necessary to take into account the whole of the Eucalypti vegetation. Four-fifths of Australian vegetation consisted of the Eucalyptus. Australia, on the whole, might be said to be pretty free from violent endemic or miasmatic poisons, and concerning the latter they might be said to exist only as the Eucalyptus receded. The physical geography of Australia did not differ in general outline from that of other countries, but the vegetation of the Eucalypti was absolutely indigenous to Australia and Tasmania. Baron von Mueller described 130 species of this genus as existing in Australia. The physical properties of all Eucalypts were that they cast their bark and that their leaves were evergreen, with, in some species, translucent cells. The chemical contents of a Eucalyptus tree were neither poisonous nor virulent, and from the tree might be obtained a tannate gum resin, a volatile acid, and a volatile oil, peculiarly of Eucalyptic origin. The two first were found in most parts of the tree, but the latter only in the leaves. In those three constituents the key to the question was to be found. The first matter to consider was whether there was any proof that these volatile bodies were set free in the air by the forces of the plant in unison with atmospheric agencies, and if so, when did the process take place, what was the quantity, and what was the probable sanitary effect. He then proceeded to give a detailed account of his experiments in the extraction of Eucalyptus oil. The representative species were the manna gum, the odorata, the red gum, stringy bark, iron bark, blue gum, mallee, and peppermint. The mallee supplied an abundance of oil during the moist season, and the coast species during the summer months. In fact, as midwinter approached, the coast species were ebbing in volatile products, and the others were flowing. The evidence of oil evaporation might thus be stated—that the desert scrub gums, after a winter of average rainfall, supplied the air with a continuous and even quantity of aromatic vapour, and kept up a vigorous vitality throughout the summer, and that a short season of rain, and a long dry summer, diminished the formation of oil and so lessened the exhalation; but, on the other hand, the species tending seaward increased their quantity after a short winter. The aroma of the volatile acid present in the Eucalyptus might be detected in the air, along with that of the oil, when travelling in the bush. The extent of the Eucalyptus vegetation in Victoria was given by Mr. Skene, in his report to the commissioners of the exhibition, as follows:—"The area of the whole colony was 55,644,000 acres, of which 5,560,000 acres was of dense mallee scrub; 6,225,000 acres of mountainous ranges, densely wooded with gums; and 38,922,000 acres of open timbered country." He calculated that mallee scrub would retain in the leaves, at one time, 4,843,872,000 gallons of oil, and the seaward species 280,891,000 gallons. The extent of mallee country in New South Wales and South Australia was estimated at 20 times the area in Victoria, and that would, calculated on the same basis, return 96,877,440,000 gallons of oil, held at one and the same time in a belt of country massed together over which the hot winds traversed. Considering, also, that the same condition existed throughout the greater part of Australia with the other Eucalypts, he could not arrive at any other conclusion than that the whole atmosphere of Australia was more or less affected by the perpetual exhalation of these volatile bodies. From all that he could gather on the subject, he arrived at the conclusion that there was an active agency existing in Australian vegetation over that of other countries, and the exhalation from which gave to the atmosphere an invigorating and healthy tone. After examining all the evidence, he came to the conclusion that the Eucalyptus was a fever-destroying tree.

THE DEVELOPMENT OF AMERICAN PHARMACY.

THE transition of pharmacy in America from the "Backwoods" phase, as depicted in a former article, to its present more civilised type, has been in a great degree the work of individual chemists and druggists, incited by a natural trade ambition and by the demands of a more and more populous and wealthy surrounding of patrons.

Few of the chemists of to-day have received any special education for their position. Many are as accomplished as can be desired, and have become so entirely by their experience behind the counter.

In America every "Drug Clerk" looks forward to becoming the proprietor of an establishment after a few years' service, and he feels a pride in fitting himself as thoroughly as possible for working the business in an intelligent and profitable manner. Money-making is the great incentive, and these efforts are in most cases well rewarded.

In addition to the trade in medicines still transacted by the general country stores in thinly settled sections, there are to-day in the forty States of the Union not less than 20,000 regular druggists' establishments, and much the larger proportion of this great number, one year with another, do a profitable trade. Any well-established chemist and druggist in America who is systematic and attentive to business is pretty sure of accumulating a fair, and in some cases a handsome, competency; and this result is obtained, it may be remarked, in the face of much larger shops, as well as private expenses, than are common in Europe. Failures are infrequent; the transactions are mostly for ready money of late years, although they were not so formerly.

The great variety of stock dealt in by the American druggist enables him to augment very materially his annual returns. Paints, oils, window glass, and all similar items used in building, are a heavy part of the drug business in most sections, as are also dyes, naval stores, &c. All the perfumery is also sold by druggists, and this in large towns adds an extensive and profitable branch of business to the general total. In the largest cities there are druggists who discard most of the previous items, and do what is denominated a "prescription business." These, however, generally keep very developed assortments of patent medicines, English and French as well as American, also heavy stocks of perfumeries, fancy soaps, brushes, and toilet nicknacks of the most fashionable makers in the three countries. There is the inevitable soda-water fountain, gorgeously silver plated, with the national "bird" perched on its summit, complacently counting the throng of customers. Adjoining are other mysterious silver knobs on the marble counter, by pressing which tumblers of factitious *Vichy*, *Kissingen*, and other mineral waters are drawn. "Ottowa Beer" is another beverage dispensed by the drug stores. Thus has the enterprising druggist added on to his trade profitable and taking items, until the regular dispensing and medicine business has almost, if not quite, fallen to the rear.

Clerks are much better paid than in Europe, and are at the same time required to be very active. Even the boys are paid salaries ranging from twenty to thirty pounds per annum. Paying a premium for the entrance of a lad into a shop may be practised in some sections of the Union, but the writer has never known of such a case.

Promotions and increase of salaries in all flourishing establishments are frequent, and soon develop the staff into one of practical value. First-class prescription clerks generally receive from one to two hundred pounds per annum, providing their own "board and lodging" out of this sum.

The majority of shops are shut on Sunday and do not answer night calls; but there are always one or two in each neighbourhood who keep open certain hours on Sunday and reply to demands upon them after business hours.

A few years since one of the leading and most fashionable shops in Broadway, New York, innovated on the usual system by keeping open all night, the beautiful shop being as well lighted at two or three o'clock in the morning as early in the evening, and it was said the experiment was pecuniarily a success, while at the same time adding considerably to the popularity of the establishment.

A drug clerk in America is expected to go beyond the delivery of the article asked for and endeavour to tempt the customer to some further purchase. The arrangement of the best American shops facilitates this idea, the counters being generally entirely covered with large and expensive show-cases filled with the most elegant items of perfumery, brushes, and fancy goods.

The manner of fitting up American shops is, in regard to bringing the stock immediately under the notice of the buyer, much superior to the European system.

American druggists are always liberal advertisers in the daily newspapers, aside from the patent medicine announcements to which their names may be appended by the proprietors. The pickled serpents and other pleasing monsters which one sees displayed in jars in the windows of French pharmacies find no place in an American drug store: the time-honoured show-bottles filled with the most brilliant-coloured liquids are still conspicuous in the windows of every well-appointed shop, the most modern and luxurious of which have indulged in elegant cut-glass globes of the costliest description. The style of putting up and sending out prescriptions and medicines generally in all first-class shops has been much ameliorated of late years, and considerable style is now affected by all the most elegant establishments, quite as much, perhaps, as in the best English and French pharmacies. The advance in style, taken in connection with the increasing cost of doing business, has led to a corresponding increase in the retail prices, which are willingly paid by the best class of clients. All first-class drug stores demand at least twice the price charged ten years since for medicines, and as the population is much greater, and wealth more generally distributed, there is noticeable a disposition to patronise the shops known to be high-priced, while the modest competitor in a side street wastes his life in waiting for a limited patronage. Those falling under the latter description are, however, few in number. Taking the cities of New York and Brooklyn, for example, which form in point of fact one city of a million to twelve hundred thousand inhabitants, there exist within their borders not less than a thousand retail pharmacies, and very few can complain of lack of business, although the competition in some neighbourhoods is very considerable. In the purchase and sale of the proprietorship of such establishments there is very seldom any bonus paid. The fixtures and stock are generally inventoried at cost price, and as all shops have more or less dead and damaged stock, among which it is not rare to find startling remainders of antediluvian patent medicines, the taking over of these items and fittings at prime cost is regarded as quite enough bonus to pay on entering an apparently established business. It must also be taken into consideration that the change of proprietorship is a delicate matter, and one which involves some commercial risk, from the fact that the sales and profits are often allied and proportional to the personal qualities of the head of the business. This brings us to the subject of the "popular druggist"—one upon which a few remarks may be devoted.

If a young man he must belong to the following, among other organisations, to give him a good run of trade:—A respectable church; the Sunday school thereof; a Young Men's Christian Association; a Militia regiment of the proper social stripe; a Masonic lodge, or the "Oddfellows;" a Young Men's Library and Lecture Association; some musical organisation; a yacht or boating club; a base ball association; keep a buggy and a three-minute horse, and show up quietly on the road two or three times a week; have a wife quite capable of doing the agreeable with the lady clients by reciprocal visits, sociables, hops, &c.; or, if unmarried, be the subject of manifold attacks in the shop and at all evening reunions from the marriageable young ladies of the neighbourhood.

All this, and more, comes within the province, and it may almost be said the bounden duty of every well-regulated druggist aspiring to be popular and to do a paying business. If he happens to be of an age too ripe for participation in these duties and distractions, a part of them are performed by the "head clerk" of the concern, who thus fills the *role* of "double" for his employer in a very agreeable manner, extra salary and the requisite spare time being comfortably arranged.

The sum total of the business and private expenses of our druggist assumes, therefore, very considerable proportions, and it is only by liberal returns that he is able to afford such outgoes and count upon a decent annual residue of profit. A favourable result, however, may almost certainly be looked for if all the "strings are pulled" with industry and tact.

The voice of our druggist is potential with all his clients in regard to many of the specialities, especially the newest aspirants for popular favour. He quite naturally recommends established preparations, and during the earlier months of any new item in which he has not sufficient confidence to keep a stock, his opinion is delivered gratis when the article is asked for—something in this wise: "Don't think it amounts to much;" or more forcibly still, "Guess it's a humbug;" continuing, "I have an article which is reliable." The innocent sufferer from some imaginary complaint — generally that mysterious, unfathomable, incurable, and uncomfortable affection denominated "dyspepsia," asks, "Can you recommend it?" The affirmative reply of our pharmacist clinches the affair, and the purchaser goes on his way, half cured already by the simple possession of and faith in the magic bottle. For a people of such general intelligence, the American population certainly does encourage with a most astonishing confidence the speciality promoters, and we may cease to wonder at the millions upon millions of accumulated wealth which have resulted from the efforts of the Patent Medicine Princes there during the last twenty years.

Not to make our portrait of the typical druggist too prolix, we shall only mention in passing that he is considered to be one of the "best informed men" in the neighbourhood upon all local topics; the latest news frequently becomes current through his medium, and oftentimes the easiest way of authenticating a vague rumour is to refer to the drug store. The current in and out of a favourite corner drug store is something wonderful on a summer evening. As a *but de promenade* for people who do not affect bars, billiard-rooms, and similar entertaining resorts, the drug store has a moral and gossipy interest not without value in the eyes of its clients and likely to result profitably to its proprietor.

With so much to do in his business, and generally with so good a will to do it in view of ultimate results it is not perhaps surprising that the scientific organisations of pharmacists in America have been less successful in point of membership than might at first sight have been anticipated. Thus far such societies in the United States have had but an initiatory existence, gathering within their circles, it is true, many of the brightest intelligences of the trade, but on the whole failing to convert the numerous body of the druggists to their ranks—the practical results of uniting with them being too intangible to admit of the hope of general adherence for the present.

The parent society, after an existence of a little less than a quarter of a century, has now a membership of less than one-twentieth of the trade, and its annual gatherings attract only about one two-hundredth thereof. Obviously, therefore, it would be too generous to regard this organisation, even when supplemented by the several local ones in various cities, as occupying an authoritative position among the great body of the American druggists.

This society being without a legally defined status and power, even advisory, obtains a hearing very naturally only from a most limited group. In its earliest years a few earnest workers not concerned with any trade interest (with one or two exceptions) carried on its affairs in the city of Philadelphia: one of the most active members was the regretted Mr. Proctor, lately deceased; he was aided by Mr. Parrish, also now dead. This latter gentleman was always present at the annual meetings, and took a foremost part in advancing the interests of the organisation. Being, however, interested in several specialities, his conscientious labours were not at all times estimated by the body of the druggists as entirely disinterested. This criticism could also be applied to several other members who came into full view at the annual sessions. We are quite safe in stating that the majority of the working members were manufacturers and proprietors of specialities, or were not chemists and druggists at all. In the course of events one of the annual meetings came to be held in the metropolitan city of New York, and in consequence the trade was appealed to for funds to extend the usual social courtesies to the members. The response was liberal and the affair passed off with much *eclat*: the occasion was natural for the development of the list of members in the most important American city, and for the first time the wholesale trade there took note of the existence of this society, and several became members, while others who were disposed to do so were not favourably reported on by the committee on membership, on the plea of being too much engaged in dealing in patent medicines. This came with a bad grace from a society whose list of members embraced so large a number of druggists interested in pushing certain specialities. The occasion was therefore lost of acquiring a strong foothold among the most pushing, intelligent and powerful of the wholesale druggists of New York, and the Society has subsequently progressed in the old-time way, holding its thinly-attended annual meetings wherever the gods seemed to appoint, and although manifestly progressing in position and influence, not doing so at a rate at all commensurate with the number and importance of the drug trade in the Union.

Up to the time of this meeting in New York the proceedings at the sessions were only published at the end of the year in the annual volume of Transactions, but on this occasion an enterprising drug journal went to a considerable expense in giving a very lengthy stenographic report, of which an extra edition of ten thousand copies was printed at the expense of the proprietor of the journal, and sent to that number of druggists throughout the country. This was the grandest advertisement the society had ever received, and true to their fossilized instincts, they omitted to make any formal recognition of the service thus rendered—an omission which the editor of the Transactions (Mr. Proctor) very handsomely made amends for in the preface to the volume for that year.

CHEMICAL SOCIETY

Thursday, November 4, 1874.

Professor Odling, President, in the Chair.

After the ordinary business of the Society had been transacted, the following Papers were read:—1. On "Methylhexyl Carbinol," by Dr. C. Schorlemmer. 2. "On the Action of Organic Acids and their Anhydrides on the Natural Alkaloids," Part I., by Dr. C. R. A. Wright. 3. "Action of Bromine in the Presence of Water on Bromopyrogallol and Bromopyrocatechin," by Dr. J. Stenhouse. 4. "Action of Baryta on Oil of Cloves," by Professor A. H. Church. 5. "Observations on the use of Permanganate of Potash in Volumetric Analysis, and on the Estimation of Iron in Iron Ores," by Mr. E. A. Parnell. 6. "Further Researches on Bibrubin and its Compounds," by Dr. J. L. W. Thudicum.

The meeting was finally adjourned until Thursday, November 19, when the following Papers will be read:—1. "Action of Organic Acids and their Anhydrides on the Natural Alkaloids," Part II., by G. H. Beckett and C. R. A. Wright. D.Sc. 2. "On the General Equations of Chemical Reactions," by W. K. Clifford, F.R.S. 3. "On Propionic Coumarine and some of its Derivatives," by W. H. Perkin, F.R.S.

LEAD IN POTABLE WATERS.

PUBLIC attention has lately been drawn, by some painful cases of disease and subsequent death, to the danger of drinking water containing lead, and as there can be no doubt that leaden pipes and cisterns are still used to a great extent for the conveyance and storage of water, it becomes a matter of great importance to ascertain under what conditions water so conveyed or stored becomes impregnated with the metal in sufficient quantity to be injurious to health and life.

The general impression amongst chemists has hitherto been that soft water has the power of acting upon lead, whilst hard water fails to do so; but it has been proved that the very soft water of Loch Ness had no effect upon the metal after passing through it for six years, and experiments upon other waters of an equally soft character showed that they remained unaffected after long contact with lead.

There are, however, certain conditions under which water is found to take up an appreciable quantity of lead, and one of those conditions is the presence of oxygen in the water.

Now, under favourable circumstances, 100 volumes of water are capable of absorbing 3 volumes of oxygen, and as this gas forms one-fifth of the bulk of the atmosphere, it follows that the longer a water, during its passage from its source to the cistern, is exposed to the air, the more oxygen is it likely to absorb, and consequently the greater will be its solvent power upon lead. Experience proves that these conditions are exactly fulfilled in many cases, especially in the water supply of some country houses; and the well-known deleterious effects of even minute quantities of lead upon the human body render it highly desirable that so fertile a source of disease should be avoided. Of course, the remedy which most naturally suggests itself is the removal of the lead fittings, and the substitution of some less noxious material, but in many instances this is impracticable.

There is, however, one very simple method of guarding against lead-poisoning, and that is filtration. It is well known to chemists that charcoal, in some forms, has the property of decomposing the salts of lead and rendering them innocuous. Advantage has been taken of this principle in the manufacture of the silicated carbon filters, which so completely remove lead from water that the most delicate chemical tests fail to detect the slightest trace after filtration.

Provincial Reports.

DUBLIN.

Chemists' and Druggists' Society of Ireland.

The first meeting of this Society for the Session 1874–75 was held on Monday evening, the 9th inst., at 44 Molesworth Street, E. M. Hodgson, Esq., President, in the chair. The attendance was very large. In opening the proceedings the President said the first business of the meeting was the election of office-bearers for the coming year, which was then proceeded with. The President, Vice-President, Secretary, and Treasurer, were re-elected unanimously, each of whom in suitable words acknowledged the compliment. The meeting then proceeded to elect by ballot the Committee, when the following gentlemen were declared elected:—Messrs. J. T. Holmes, Robt. Simpson, Stanley Oldham, W. Ledger Ersou, John O'Brien, and W. Allen. The following gentlemen were admitted to membership:—Mr. R. Watson, Mr. Thos. Gillespie, Banbridge; Mr. English, Cahirciveen; Mr. M. J. O'Sullivan, Kingstown. The President stated that the most important step to be taken was the formation of classes, a step he strongly urged in view of pending legislation. A long discussion ensued, and eventually it was decided that classes be at once formed. Professor Tichborne has undertaken the classes in Chemistry and Practical Pharmacy. It is not yet decided who is to be the Professor in Botany and Materia Medica. The fee fixed is extremely moderate, viz., 2*l.* 2*s.* for two evenings per week for six months. Several employers and assistants at once joined the classes.

GLASGOW.

Glasgow Chemists' and Druggists' Association.

The second meeting of the session was held on October 28 in Anderson's University, Mr. John Currie, President, in the chair. There was a very large attendance. In course of the usual preliminary business several donations of books to the library were announced, new members enrolled, and enrolments made for the Tutorial and Practical Pharmaceutical Chemistry classes. The Chairman then introduced William Gilmour, Esq., Ph C., Edinburgh (President N.B. Branch Pharmaceutical Society), who delivered a most interesting lecture on "Chromatic Phenomena of Crystallisation," which was profusely illustrated by diagrams, &c. At the close Mr. Gilmour was awarded a hearty vote of thanks for his lecture. On account of the length of time taken up with the illustrations, general matters of business were postponed till next meeting.

Assistants' Section.

The opening meeting of Session 1874–5 was held in the West Hall, Anderson's University, on Wednesday, October 14, at 9 P.M., the President, Mr. John C. Hunter, in the chair. There was a good attendance of members. The meeting being constituted, twelve new members were elected.

The President then delivered an opening address on "The History of the Microscope" (which we hope to find space for in a future issue).

The Secretary (Mr. John Foster) then intimated that a tutorial class would be formed to assist young men in preparing for the preliminary examination, should a sufficient number come forward. At the close of the meeting fifteen gentlemen enrolled themselves for the same.

A letter was then read from a gentleman in Eglinton Street complaining of some neighbouring chemists falling through the early closing movement. Messrs. Murdoch and Hunter were appointed a deputation to call upon the said gentleman to see of whom he complained. The following donations were made to the library from Mr. R. S. Neilson:—"Green's Botanical Dictionary," 2 vols., and "Spon's Workshop Receipts;" from Mr. John C. Hunter, President, a second donation of microscopic objects. At the meeting on Wednesday, November 11, Mr. William Currie read a Paper on "Bleaching."

HALIFAX.

Halifax and District Chemists' Association.

In order to meet as many of their country members as possible the annual meeting and dinner was held this year at Brighouse, October 15. Mr. Hebden, in eulogistic terms, proposed that Mr. Jessop be re-elected President for the ensuing year. This was seconded by Mr. Stott, and carried unanimously. The Vice-Presidents elected were Messrs. Stott and Hebden; Treasurer, Mr. J. B. Brierly; Hon. Sec., Mr. Brook; Committee, Messrs. Dyer, Farr, Shaw, Blade, and Swires. The President, in accepting the office for the third year, congratulated the meeting on the beneficial results which had flowed from the Society, such as a more even and a higher scale of charges for dispensing and retailing, as well as a more uniform hour of closing. "Permit me to make a few remarks," he added, "on a subject of importance to us at the present time. I allude to the formation of another association in the town by the assistants in the drug trade. You have all seen the extravagant programme they have issued, and after reading of so many failures on the part of others, shall we not be best consulting their interest by discouraging them at the outset. If they are really in earnest, I say with all my heart let us encourage them all we can to use the means already sufficient and easy of access. I would further stimulate them to greater zeal by contributing part or all the cost consequent on their attending the necessary classes for perfecting themselves in Latin, chemistry, botany, &c. The great and rapid increase in patent and proprietary medicines, and the liberal offers held out for their sale, must necessarily cause sound judgment and caution to be exercised, else bad stock will soon accumulate. Would not an arrangement amongst ourselves on the principle of sale or return prove a check in this respect. I want also to draw your attention to a practice carried out to some extent in this neighbourhood, viz., the objectionable one of opening patent medicines and selling out pills and powders in small quantities. This might be looked for in a huckster's shop, but is quite *infra dig.* in that of a chemist." The Hon. Secretary read the report, which touched upon the early closing movement, charges and arrangements in connection with dispensing prescriptions, Food and Drug Adulteration Act, Jury Bill, London Civil Service Stores, and the library. Mr. Stott moved, and Mr. Hodson seconded, its adoption by the meeting, which was carried unanimously. The letter in the last number of The Chemist and Druggist by "Justitia," was brought under notice, and it was thought that instead of being an unqualified withdrawal, which the chemists had a right to expect, it was rather the reverse. Mr. Hebden then brought the new Assistants' Association under review, and criticised it rather unfavourably, whilst Mr. Farr, admitting that they were aiming at a great deal too much, hoped they would make some headway in the matter; and Mr. Shaw expressed his sympathy for them, and hoped next year he might be able to arrange a few lectures with them, either on Materia Medica or the Pharmacopœia. Ultimately the President, Hon. Sec., and Mr. Shaw were appointed a committee to confer with the assistants, and report to a future meeting. A vote of thanks to the country members was responded to by Mr. Chappell. A vote of thanks to the Hon. Sec., and also to the President, brought the sixth annual meeting to a close.

LEEDS.

Leeds Chemists' Association.

The twelfth annual meeting was held in the Library on Wednesday afternoon, October 14, 1874, the President, Mr. F. Reynolds, in the chair. The minutes of the last meeting having been read and confirmed, the Secretary (Mr. J. W. Longley) read the report, which indicated a successful year both numerically and financially, but was not altogether encouraging in respect to the results of the educational efforts put forth by the Association. The number of members was 39, showing an increase of 4 over last year; there were 56 associates, which was 9 more than in the previous session. The committee hold at present a balance in favour of the Society of 9*l.* 1*s.* 6*d.* After recapitulating the transactions of the Society for the past year, the report continued as follows:—"A class has been conducted by Mr. J. Abbott during the past session on Materia Medica, and has been attended by 17 students from our Society. Two prizes were offered—the first a book value 15*s.*, and the second a book value 7*s.* 6*d.* Mr. Hanbury was asked to adjudicate on the papers, and kindly consented. Only four candidates presented themselves for examination. None of the candidates having arrived at Mr. Hanbury's standard of merit, your committee regret that they could not conscientiously award a prize to any of the students. A class has been conducted by Mr. George Ward, during the last session, on Inorganic and Organic Chemistry, and has been well attended by the chemists' assistants and apprentices in the town. The following is the result of the examination held at the conclusion of the course under the Science and Art Department, so far as our associates are concerned:—*Inorganic Chemistry:* E. O. Brown, elementary grade 1st class and laboratory practice; J. Fisher, elementary grade 2nd class. *Organic Chemistry:* A. A. Pearson, advanced grade, 2nd class and laboratory practice. Two prizes were offered by the committee of books, value the same amount as those for the Materia students. Dr. Attfield adjudicated. Only two candidates presented themselves. The first prize was given to Mr. E. O. Brown and the second to Mr. C. A. Smith." The report concluded by urging the members to induce more associates to join the Society. The strength of the Association was not what it should be, compared to the number of assistants and apprentices in the town.

On the motion of Mr. E. Brown, seconded by Mr. Taylor, the report was adopted. The election of officers for the coming session resulted thus:—President, Mr. F. Reynolds; Vice-President, Mr. E. Yewdall; Honorary Secretary, Mr. Taylor; Librarian, Mr. E. O. Brown; Curator, Mr. Payne; Committee: Messrs. E. Brown, G. Ward, Wm. Smeeton, J. W. Longley, R. Simpson, and P. Jefferson.

Mr. F. Reynolds then moved that a vote of thanks be given to the retiring officers, and spoke in praise of the manner in which Mr. Longley had fulfilled his duties as Hon. Secretary. Mr. E. Brown said he could fully endorse the remarks of the President. The motion was then seconded by Mr. Yewdall and carried. It was then resolved that two prize books be given at the end of the course to the two students from the Association who have attended Mr. Ward's class and attained the most proficiency, the first book to be of the value of 14*s.*, and the second 7*s.* Mr. Brown kindly offered to give a book value 7*s.* for the second best student in the Materia Medica class, Mr. R. Reynolds having offered to give a book as first prize at the last meeting.

LIVERPOOL.

Liverpool Chemists' Association.

The opening meeting of the Session was held on October 22, when Mr. A. H. Mason, F.C.S., delivered the inaugural address, from which we extract the most important paragraphs:

"Having for our object the advancement of chemical and pharmaceutical science, we are essentially an educational body, composed of various elements—I trust seeking the same end—instituted by its founders as an offspring chiefly to second the efforts of the Pharmaceutical Society of Great Britain in raising the condition of British pharmacy and improving the status of the British pharmacist. I do not, therefore, purpose troubling you with any *résumé* upon the merits or otherwise of the Adulteration Act (further than that in my opinion it has been productive of great gain to the analytical chemist, and of considerable benefit to the general public), or upon the desirability of early closing, uniform prices, the snare of patent medicine stamps, &c., and similar questions which have been raised in this room, as I am convinced that, whenever we have allowed trade questions to be brought forward, they have always been productive of evil, and led to differences which I trust, gentlemen, have long ere this passed into oblivion. We are not a trade body, nor can we legally permit such discussions. I say this because I believe it is the opinion of some of our members that we should admit such.

"Admitting that we are an educational body, let us for a few moments consider the advantages of a pharmaceutical education. Pharmacy is not a trade. Pharmacy is an art and a science; and this fact becomes more and more evident as the rapid advancement of science determines the equally rapid progress of pharmacy, in common with the industrial arts. The basis of every exact science is observation; the experience gained thereby leads, on the one hand, to reasoning power, and to the establishment of fundamental principles, and, on the other hand, to the generalisation of scientific truths. It is a guide to synthesis, as well as to the opposite method of investigation, analysis.

"The selection of all medicinal substances of unexceptional purity; the recognition of all adulterations and impurities; the manufacture of chemical and pharmaceutical preparations by the formulas of the Pharmacopœia; the collection, drying, and preservation of all crude drugs, their proper comminution and exhaustion by maceration or displacement, the compounding of physicians' prescriptions with correctness and nicety, belong to the art of pharmacy. While the knowledge of the reasons why a prescription should be prepared in a particular way, of the causes which affect the success of percolation, of the influence of heat, moisture, atmosphere, age, &c. upon drugs; of the development in plants and their parts, of the active principle or principles; of the causes of success or failure in carrying out any process or manipulation connected with pharmacy, properly belong to science in its bearing upon pharmacy.

"Further, in the study of pharmacy we find ourselves aided by natural philosophy, chemistry, botany, zoology, geology, and mineralogy. Time this evening will only permit me to enlarge upon chemistry, as most important in its influence upon the development of medicine, and the selection of curative agents; the science which deals with the relations of the various kinds of matter to each other, the labours of whose students are influencing the investigation of every other branch of natural science, are felt in numerous trades and manufactures, and are of the utmost importance in their bearings upon every-day life. It is not many years ago when the brines left after the separation of common salt from saline spring or sea water were without value; now immense quantities of bromine are recovered from it, and that element has not only become an indispensable article in many of the arts, but medicine has also appropriated it for the cure of disease. Its compounds, too, which in our time were but chemical curiosities, are now to be found in every dispensary, and are prescribed by every physician. The oily and tarry products of our gas factories were supposed for a long time to be valueless, until chemistry converted some of them into brilliant colours of every shade and hue, which are now employed in dyeing fabrics and various commodities. The mother liquor from soap was thought to be a waste product, until uses were found for its most important constituents, and glycerine is now such an indispensable agent in pharmacy, medicine, the arts, and the household, that we may well wonder how civilised mankind could get along without an article which, in its natural combination, is daily employed everywhere.

"Owing to the investigations of chemistry, many articles of materia medica have been displaced, and others doubtless, sooner or later, will pass into deserved obscurity.

"Acidulous fruit, the sorrels, and other acidulous drugs are gradually being retired from active service, since the pure acids, upon which their virtues depend, are being prepared in large quantities, and in condition fit for long preservation. Since the vegetable alkaloids have been discovered, and the process for their manufacture perfected, their employment in medicine has gradually increased, and, as a matter of consequence, the corresponding increase in the use of the crude material has been prevented. But chemistry is not content even with such results. By processes of substitution it furnishes new remedies of valuable medicinal properties, which will probably take the place of older remedies. Chloral, croton chloral, and monobromated camphor are instances, among others, of such innovation. Already chemistry has prepared a new way for replacing time-honoured medicines by offering apo-derivatives of alkaloids, at least one of which, apomorphia, promises not only to hold its place against various mineral emetics, but threatens even to supersede such a valuable emetic as ipecacuanha, and to render fears groundless should the plant be gradually exterminated.

"Too true it is that, whilst your Council are desirous to do all in their power to attain the objects of our Association by assisting students in chemistry and pharmacy, of late their provision has fallen off, not from any want of material, but owing to a lack of sympathy from those for whom such classes are formed. But is this Society singular in this respect? No. Kindred associations, and even the parent Society herself, groan beneath the weight of 'cram,' against which there has been of late so just an outcry, but which will probably exist as long as examination is made the only test of knowledge. There are hopes, however, of better days.

"We have plenty of evidence from great authorities, such as Lord Derby, Disraeli, Gladstone, and others, that compulsory examination, taken alone, is quite insufficient to produce a demand for real education, and we must admit that examination, *per se*, never was, and probably never can be, a thorough test of competency. But the evil is not found among pharmacists only; analytical and consulting chemists are also in the same category, and it is painful to hear of analytical chemists offering to perform analyses for fees which cannot cover the outlay of pure re-agents, and asking clients the significant question, whether they are buying or selling the sample which they bring for analysis.

"In olden days an indenture of apprenticeship (which in our case probably necessitated a good premium as well), duly endorsed by the master with a satisfactory reference as to character, &c., during the period of probation, was a *sine quâ non* qualification to secure a position as a qualified journeyman; and what did that amount to but a compulsory education? Is it too much for those who organise pharmaceutical examinations that they should require a curriculum of compulsory education, as has been suggested, evidence of a three years' pupilage or apprenticeship, and, further, evidence of having attended lectures in a recognised school of pharmacy.

"In these days of high pressure the lack of novelties is evident. Occasionally our expectations are raised by the appearance of a condurango bark, and we are led to wonder how it is that the marvellous properties of such a medicine disappear in transit to England? From the Brazils, *viâ* Paris, a few months ago, we received 'Guarana,' now a recognised medicine of value, and we are looking for some confirmation from the same source of the supposed virtues of 'Jaborandi,' described as an energetic diaphoretic and sialagogue. Eucalyptus globulus has proved useful in therapeutics, and as a fever destroyer, and the perseverance of Mr. Baildon in reviving cortex rhamni frangulæ deserves our appreciation.

"Chemical investigation will ever result in new discoveries, and the most interesting of late is probably the conversion of coniferin into the active principle of vanilla, by Messrs. Tiemann & Haarmann, of Berlin. In their communication the authors commence by describing the preparation of coniferin ($C_{16}H_{22}O_8$), the raw material used being the juice from recently felled and barked pine-trees in spring time. This is split up by digestion at a gentle heat, with a small quantity of emulsion. The vanillin thus obtained ($C_8H_4O_3$) is at first inodorous, but in the course of time acquires a faint odour of vanilla. The chemical world is indebted to these gentlemen for their announcement. In former days there seemed to be a kind of fatality about great discoveries. Men stumbled across valuable ideas, and learned, too soon, important truths, which lay dormant, only to be appreciated by the world after their departure.

"The history of arts and sciences offers many examples. Faraday, in 1825, found benzol in the tarry residues of gasworks, but that illustrious chemist obtained, whilst living, neither fame nor profit for his discovery, which remained buried in the archives of the Royal Institution until the attention of the scientific and industrial world was drawn to the chemical properties of the substance, almost forty years later on.

"Before concluding, permit me to say a word or two about the session just inaugurated. Your Council have arranged for a course of lectures on Inorganic Chemistry, Preparation of Chemical Products used in Pharmacy, and Qualitative and Volumetric Analysis, to be delivered by Mr. Edward Davies, F.C.S., Lecturer on Experimental Physics, Queen's College, &c., assisted by Mr. M'Gowan, late Young's Burser, Andersonian University, Glasgow. The course will extend over six months, should a sufficient number of students apply for admission, ten being the minimum. It has been thought more to the interest of students and the convenience of employers to hold the classes from 9 to 10 A.M. In the name of our Council, let me entreat of you young men to avail yourselves of the opportunities we offer you. These lectures are such as will, with diligence on your part, materially assist you in your further studies. You are probably aware that the examinations of the Pharmaceutical Society have been altered, not made more stringent, but more practical. The Council propose to grant certificates of attendance to those who merit them, and, further, Mr. Davies has kindly offered a prize for the best student during the session. Professor Attfield has also consented to send down some examination papers, and report the results, and upon those results I propose to place prizes at the disposal of those who rank first and second. These prizes are offered, not as an inducement to attend the classes, but as an appreciation of your desire to promote the interests of the Liverpool School of Pharmacy, by your diligence and ability. To all those masters who have apprentices in this town I would say, 'Beware of your responsibility, and encourage your students to join these classes.'

"Your Council proposes to vary the business of the Association by making the alternate meeting of a conversational character, by which means members may be brought more into personal contact. Any objects of interest may be exhibited and explained, difficulties which arise in manipulation may perhaps be solved, difficult and extraordinary prescriptions might be discussed, and I would suggest entire freedom in the matter. Once a month we propose to have Papers on scientific subjects, and I have already promises which I trust will make our session a very successful one. I rely upon your unanimous and individual support. Let each one of us feel that upon himself—his own work—the success of the Association depends.

"Homer says:—

> 'By mutual confidence, mutual aid,
> Great deeds are done, and great advances made.'

May this be our experience!"

Mr. ABRAHAM moved that the thanks of the meeting be given to the President for his excellent address, with all of which he thought he could cordially agree, except that he did not concur with the President and others in thinking that candidates should not be admitted to the examinations of the Pharmaceutical Society unless they had passed through a prescribed curriculum. He appreciated very highly systematic instruction by lectures, demonstrations, and practical courses of instruction, but he thought that such restrictions would not only tend to discourage private study, but would work an injustice in the case of those who had not the means of pursuing a regular course of study. The argument, he understood, was that examinations would not sufficiently test the qualifications of candidates. He could not believe this. It might be difficult or impossible to test them during the minutes now devoted to the purpose; but why not, if needful, extend the time? The India Civil Service examinations sometimes occupied more than a week, and ours might be equally extended rather than adopt the alternative proposed, and refuse examination to a self-educated man. Let the examination be adapted to the occasion, and he believed they would answer their purpose.

Dr. COOK seconded the motion, but said he had listened to the address with a great deal of pain and sorrow. It was much too pharmaceutical, and he did not agree that the Association was of the nature described. He had, a few days previously, devoted some time in going over the books, &c., of the Association, and he found that whenever the pharmaceutical element had been brought so much to the front—and the Society was under pharmaceutical *régime*—it had not prospered. His opinion was that it was a strictly scientific chemical society, and if properly guided in this spirit it would prosper. The President had alluded to Professor Faraday and his discovery of benzol; if such men had confined themselves to pharmaceutical chemistry these discoveries would have never been made.

Mr. EDWARD DAVIES, F.C.S., Vice-President, supported the motion. He did not agree with Dr. Cook that the objects, &c., of the Association had been erroneously brought before them, and, speaking as a scientific chemist, he considered that they could not overrate the value of the study of pharmaceutical chemistry. He had much pleasure in agreeing with the views of the President.

Mr. **Shaw** supported the motion, and thought Dr. Cook to be in error. He said the Society in London had given the matter much consideration; he agreed with the views of the President.

Mr. J. T. **Armstrong**, F.C.S., agreed with Dr. Cook. He had much pleasure in putting the motion to the meeting, which was carried with acclamation.

The **President** thanked the members for their compliments. He was not surprised to hear Dr. Cook's objection. He, however, hoped before the session closed that gentleman would be satisfied with the work done, for he had received promises of several Papers of a scientific nature from chemists of eminence, and the intermediate evenings might be appropriated to pharmacy proper, which subject had rather than otherwise been neglected by them of late. The next lecture would be on "The Atomic Theory," by Mr. Siebold, of Manchester, editor of the "Year Book of Pharmacy."

MANCHESTER.

Manchester Chemists' and Druggists' Association and School of Pharmacy.

The sixth annual meeting of this Association was held on Thursday evening, October 1, Mr. W. S. Brown, President, in the chair. The annual reports and statement of accounts were read and adopted, and officers for the ensuing year elected:—

President, Mr. W. S. Brown; Vice-Presidents, Mr. W. Wilkinson and Mr. J. T. Slugg, F.R.A.S; Treasurer, Mr. Geo. S. Woolley; Hon. Sec., Mr. F. Baden Benger; Council, Messrs. Barnaby, Blain, Bostock, Botham, Hargraves, Hughes, Kay, Mumbray, Payne, Robinson, Hermann, Woolley, and J. Waterhouse.

The members afterwards dined together at the Blackfriars Hotel.

The following are the most important sections of the report:—

The past year has been a somewhat uneventful one in pharmaceutical circles, but there is reason to hope that during this period the Manchester Chemists' Association has been more firmly established, and that its usefulness has not been less evident than in former years.

The numerical strength of the Association remains about the same as at the end of the last session. A large number of the chemists of the district are still unconnected with it, and as repeated applications have been made to all whose names appear in the Manchester Directory the only inference to be drawn is that they are unable to recognise the claims which we believe the Association has on their support. It should be borne in mind that through the exertions of your Association, Manchester has become a centre of pharmaceutical education: thoughtful assistants, desirous of improving themselves, are anxious to settle in the neighbourhood, and parents are beginning to see the importance of apprenticing their sons in a locality where a means of acquiring professional as well as trading experience is afforded. It should be unnecessary to point out the substantial gain thus accruing to the whole body of the trade in this district, or to urge on business men so very evident a reason for maintaining the educational character of the Association.

The income is at present insufficient to cover the charges for rent and taxes, water, gas, attendance, postage, &c., though every possible economy has been practised in conducting the business of the Association. Since its formation no paid assistance has been obtained, even for directing circulars, &c., as is usual in other large associations; and, though your council are most reluctant to curtail any of the advantages now offered to members and associates, or to propose a larger annual subscription, one of these courses seems likely to be forced upon them unless a larger number of members join our ranks.

Your council cannot refrain from an expression of regret that so few take an active part in promoting the success of the monthly and other meetings. Acceptable as are the subscriptions only of those who do not attend, it would be a great encouragement to gentlemen who devote much time and trouble to the preparation of lectures and addresses if these gatherings were more truly representative of the trade of the district. It is satisfactory, however, to notice the large number of associates always present, and your council are aware that in many cases principals are compelled to stay at home in order to give their employés the opportunity of attending.

The School of Pharmacy in connection with your Association is now recognised as one of the legitimate pharmaceutical schools of the kingdom, and, judged either by the quality of the teaching or by the number of students, will bear favourable comparison with most others. A detailed report of the school for the last session has been already published. The entries for the chemistry course were 21; for the materia medica course, 19; and for botany course 23. In these subjects no fewer than eighty lectures were delivered by Mr. Siebold. The fees formed that gentleman's very inadequate remuneration. These courses will be repeated during the ensuing session. Mr. Siebold will again undertake the chemistry and materia medica courses, whilst the services of Mr. Leo H. Grindon, well known as a lecturer on botany, have been secured in that department.

A course of practical laboratory instruction is also arranged, under the direction of Mr. Siebold.

Your council have much pleasure in announcing that Mr. Siebold has undertaken to deliver, gratuitously, a short course of lectures during the winter on "The Analysis of Common Articles of Food," to which members and associates will be admitted free.

During the six years since its formation no extraneous assistance has been asked by the Association. It is for the incoming council to decide whether, considering that the sum of upwards of 550*l*., including lecture fees, has been expended, and a further sum of 60*l*. devoted to the formation of a library, the time has not arrived when the Pharmaceutical Council should be asked for some aid in carrying on future work.

Your council would, in conclusion, again most earnestly urge on all members of the trade the duty of assisting in securing the permanent establishment and extension of our educational arrangements, fully believing that it is the interest of all to co-operate in so important an undertaking.

The Treasurer's statement showed that about 50*l*. had been received for subscriptions, and a little more than that as fees, the latter sum being paid to Mr. Siebold. The balance sheet showed a loss of 14*l*. on the year's transactions.

Pharmacy.

OIPUM TESTING.

C. **Amoldi's** method * is as follows—500 grams of dry opium are digested in 3 ozs. distilled water for 24 hours; the liquid is poured through a weighed filter, and the insoluble part again similarly digested. The insoluble part is then collected on the filter, washed with water so long as the washings are coloured, dried and weighed. Good opium should not leave more than 200 grams of insoluble residue. The solution is concentrated to 5 oz., filtered, shaken with bone-char, and again filtered; to the liquid a slight excess of ammonia is now added, whereby a precipitate of impure morphine is obtained; and this precipitate, after warming to expel excess of ammonia, is collected and weighed. Good opium yields 14·19 per cent. of impure morphine.

OIL FROM NUX VOMICA.

Mr. **Charles Bullock** † finds that four fluid ounces of this oil yield 10·6 grains of alkaloids (chiefly brescia, only a very small quantity of strychnia being present) and 14 grains of alumina, which probably existed in the seeds as phosphate. Five pints of oil were obtained from 150 pounds of nux vomica.

TO CLEAN GLASSWARE.

Dr. I. **Walz** recommends the use of potassium permanganate. The vessel to be cleansed is filled, or, if large, rinsed, with a moderately dilute solution of the salt, contact being prolonged till a film of hydrated manganic oxide has been deposited; the solution is then poured away and the glass vessel rinsed with some strong hydrochloric acid. Chlorine is found, but not in sufficient quantity to cause inconvenience, and acting in the nascent state on the organic matters, speedily converts them into substitution products, which are soluble in the slight excess of acid or water.

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* *Journ. Chem. Soc.*, from *Chem. Centr.*, 1874, p. 54.

† *American Journal of Pharmacy*, Sept. 1874, p. 405.

DETECTION OF PICRIC ACID IN BEER.

Brunner[*] recommends the following modification of Pohl's method. Acidulate the beer with hydrochloric acid, immerse a piece of woollen yarn, and digest on a water bath. Remove the wool, warm with solution of ammonia, filter, evaporate to a small bulk on the water bath, and add a few drops of a solution of cyanide of potassium. One milligramme of picric acid in a pint of beer will cause a red colouration, due to isopurpurate of potassium.

TO DETECT TURPENTINE IN LIQUID STORAX.

H. Hager[†] fuses five grams of the storax in a test tube by the water bath, and agitates with half its volume of absolute alcohol. The mixture is extracted three or four times with petroleum ether, which is evaporated over a water-bath, leaving styrol and styracin. If pure this residue is colourless, with a pleasant odour and bluish fluorescence. It is yellow if turpentine is present, and has the odour of the latter. The residue from good storax should not weigh more than 45·55 per cent. of the original weight.

THE ACTION OF SOLAR LIGHT ON IODIDE OF POTASSIUM.

In a communication presented to the Société de Pharmacie, by M. Vidan, pharmacien-major, that gentleman gives details of numerous experiments on the action of sun-light on potassium iodide. Attention was accidentally directed to the subject whilst preparing a solution of potassium iodide by pouring rain water over the salt contained in a funnel. As the solution ran through into a flask, the more highly charged liquid formed a heavy layer at the bottom, with a dilute solution floating above it. It chanced that the flask received the powerful rays of the sun through an open window, and in a very short time the strong solution in the lower part of the flask (about one-fourth of the whole contents) was noticed to be coloured yellow, the supernatant liquid being quite colourless. By agitation a colourless solution was obtained without action on starch water.

Experiments suggested by this observation led to the conclusion that the action of sun-light on solution of potassium iodide (enclosed in white glass flasks filled with the liquid, and sealed) is more energetic, (1) as the solutions are more concentrated; (2) as they are less alkaline. Iodine is liberated even in slightly alkaline solutions if the weight of salt equals the weight of solvent. If the solutions be slightly acidified with acetic acid, the separation of iodine readily occurs when 10 per cent. only of salt is present, whilst a similar solution exposed to precisely the same conditions, with the exception that sun-light is excluded by a triple shield of coloured paper, gives scarcely any indication of free iodine.

Starch paper was imbued with solution of potassium iodide, enclosed in hermetically-sealed glass flasks previously rinsed with distilled water, and the flask exposed to the sun's rays. At the end of an hour the starch paper in a white flask was coloured violet; in a blue flask, and also in a white one enveloped in two coloured papers, the one yellow and the other blue, the starch paper was unaffected. The same results were obtained with starch-paper dipped in solution of tartaric acid. In an unprotected white flask exposed to diffuse daylight the effect was less decided.

NOTE ON A NEW REACTION OF ESSENCE OF MINT.

This note was presented to the same society by M. le Dr. C. Roucher. When essence of mint is added to twenty times its weight of acetic acid, and the two agitated, a blue colouration gradually increasing in intensity begins to develop in about half-an-hour. As the colour deepens a very marked dichroism is noticed, the liquid appearing pure blue by transmitted light, and of a beautiful cinnabar red colour by reflected light. This appearance is comparable to that of alcoholic solutions of certain aniline compounds.

The coloration thus produced is not permanent. Under the influence of light it changes first to green, afterwards to yellow. The addition of water is followed by the separation of a very pale blue acetic liquid. On filtering, part of the blue colouring matter remains on the paper; this speedily changes to red, and is finally decolorised by the air. Caustic potash causes instant decolorisation.

The essence of mint employed was that usually met with in commerce. Dr. Roucher has examined other essences of known and diverse origin with a view to ascertain if they reacted in the same manner and to the same degree. He found that pure menthol dissolved in acetic acid without production of colour. Essence of turpentine, camphor, and essence of citron do not give rise to this appearance.

DECOMPOSITION OF CHLORAL HYDRATE.

M. Tauret[*] has noticed that when an alkaline solution of caustic potash, for example, is added to a mixture of hydrate of chloral and potassium permanganate dissolved in water, disengagement of gas takes place, and the liquid is decolorised, with precipitation of hydrated manganic oxide. The gas disengaged is carbonic oxide, and the filtered liquid contains chloride, carbonate, and formiate of potassium. It is not necessary that either the solution of permanganate or of alkali should be concentrated. Borax may be substituted for the alkali.

The slow decomposition of chloral by an oxidising agent (arterial blood?) suggests an explanation of the continuity of the action of chloral not in accordance with the supposed formation of chloral. M. Tauret asks if the lowering of bodily temperature observed in poisoning by carbonic oxide does not coincide in a remarkable degree with that which follows the administration of chloral.

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---

[*] *Journ. Chem. Soc.*, from *Arch. Pharm.* (3), ii. 343.

[†] *Journ. Chem. Soc.*, from *Chem. Centr.*, 1874, p. 378.

[*] *Journ. d. Pharm. et de Chémie*, Nov. 1874, p. 355.

[The following list has been compiled expressly for the Chemist and Druggist by L. de Fontainemoreau & Co., Patent Agents, 4 South Street, Finsbury, London; 10 Rue de la Fidélité, Paris; and 33 Rue des Minimes, Brussels.]

Provisional protection for six months has been granted for the following:—

3058. W. R. Lake, of London. Improvements in portable hydrogen and carburetted hydrogen gas apparatus. Dated September 5, 1874.

3100. A. M. Clark, of London. Improved apparatus for capsuling bottles and other vessels. Dated September 9, 1874.

3118. T. W. Plum, of the Mumbles, near Swansea. Improvements in furnaces for smelting metallic ores and other metallurgical purposes. Dated September 11, 1874.

3155. C. Hines, of Norwich, Norfolk. Certain improvements in the stoppers for bottles and in apparatus for filling the same and for washing the said bottles. Dated September 15, 1874.

3219. W. P. and C. E. Cherry, of Porter Street, Hull, York. Improvements in stoppers and bottles for aërated and other liquids, jars, and similar articles. Dated September 21, 1874.

3242. J. Mactear, of Glasgow. Improvements in the manufacture of soda and potash. Dated September 22, 1874.

3333. C. H. and N. G Gill, of Christian Street. Improvements in treating saccharine solutions to separate potash therefrom. Dated September 29, 1874.

3358. F. B. Michell, of Truro, Cornwall. An improved stopper for bottles for containing gaseous and other liquids, whereby filling, stoppering, and opening such bottles can be effected.

Letters Patent have been issued for the following:—

833. C. Tapp, of Mexborough, York. Improved apparatus for bottling aërated and other liquids. Dated March 6, 1874.

1259. W. H. Graham, of Bishop Auckland, Durham. Improvements in the moveable stoppers of bottles. Dated April 11, 1874.

1269. G. Auerbach and T. Gessert, of Eberfield, Germany. Improvements in manufacturing alizarine and isopurpurin out of anthracene. Dated April 13, 1874.

2071. C. Rumpff, of New York, U. S. A new or improved dry process of oxidising anthracene, and improvements in the manufacture of dyes and other colouring matters from the product so obtained. Dated June 15, 1874.

2486. T. Coad, of Park Cottage, St. Clements, near Truro, Cornwall. Improvements in stoppers for bottles containing aërated or gaseous liquids. Dated July 16, 1874.

2624. S. Nield and B. Foster, both of Leeds, York. Improvements in the manufacture of prussiate of potash and prussiate of soda, and in the means employed for collecting and utilising the gases and other substances emitted in the manufacture thereof. Dated July 27, 1874.

2639. J. H. Johnson, of London. Improvements in the manufacture of soda and potash. Dated July 28,

Specifications published during the month:—

Postage 1*d.* each extra.

1874.

448. J. Hargreaves and another. Manufacture of sulphates of soda and potassa. 8*d.*

497. L. Rose. Stoppers for bottles. 8*d.*

519. C. H. Touaillon. Stopping teeth. 8*d.*

553. H. Pocket. Combined stopper and drinking vessel. 6*d.*

591. De B. De L. Comte. Purifying alcohol. 8*d.*

561. N. Thompson. Stoppering bottles, &c. 8*d.*

653. H. Y. D. Scott. Treating sewage for manure. 4*d.*

683. H. A. Bonneville. Securing the corks of bottles. 1*s.*

687. S. H. Johnson. Furnaces, &c., for the manufacture of bisulphide of carbon. 10*d.*

700. E. Hunt. Bottles and stoppers for aërated liquids. 6*d.*

775. S. Warner and another. Invalid bedsteads. 8*d.*

799. W. R. Lake. Packing chloride of lime. 6*d.*

802. E. W. Phibbs. Treating alcoholic liquids. 4*d.*

808. W. E. Godge. Stopping bottles. 8*d.*

826. C. Eastwood. Bottles and stoppers. 4*d.*

831. W. Hunt. Manufacture of sulphate of soda, &c. 2*s.*

834. G. Naphegyi. Preserving animal and vegetable substances. 4*d.*

849. J. M. Macintosh. Closing bottles, &c. 4*d.*

878. G. J. Hinde. Utilising the waste of aniline dyes. 4*d.*

885. J. H. Johnson. Manure. 10*d.*

911. E. T. Hughes. Preparations of baryta and strontia. 6*d.*

914. S. Nield and B. Foster. Manufacture of prussiate of potash &c. 4*d.*

LIQUIDATIONS.

(By arrangement or composition.)

Notices of first general meetings have been issued in *re* the following estates.

The dates are those of the petitions:—

Arblaster, Charles J., New Street and Harley Road, Birmingham, chemist and soda-water manufacturer. Oct. 24.

Blick, Thomas E., Islip, Oxon, surgeon. Oct. 22.

Brown, James Hall, Colworth Road, Leytonstone, late Wanstead, veterinary surgeon. Nov. 2.

Johnson, George F., Duke Street, Brighton, chemist. Oct. 26.

Levermore, Edwin W., trading as E. W. Levermore & Co., 13 Cullum Street, chemical merchant. Oct. 16.

Owen, David, Rhayader, Radnorshire, chemist. Nov. 2.

Rackham, William M., Norwich, chemist. Oct. 22.

Reed, Henry W., 59 Tavistock Crescent, Westbourne Park, surgeon. Oct. 1.

Semple, Edward, Duke Street, St. James's, late Forest Hill, and Bevis Marks, chemist's sundryman. Oct. 5.

Smith, William, Bridlington, York, chemist. Oct. 8.

Thompson, Richard, Church Street, St. Helen's, druggist. Oct. 23.

Webb, Edward Charles, Sheffield, surgeon. Oct. 14.

Williams, Edward, St. George's, Shifnal, Salop, chemist and grocer. Oct. 27.

Wright, Morden, 128 Walworth Road, surgeon. Oct. 2.

PARTNERSHIPS DISSOLVED.

Clarke, E. & F., 39 Villiers Street, Bishopwearmouth, chemists. Debts by Francis Clarke.

Handford & Lycett, Atherstone, Warwickshire, surgeons. June 22 Debts by Thomas Handford.

Hatch, Isaac & Co., Bristol, and Westbury-upon-Trym, chemists. Sept. 29. As regards Richard M. Hatch.

Henderson & Smith, Holloway Road, Pentonville Road, Sydney Street, Brompton, Mount Place, Whitechapel, and Finsbury Place, medical practitioners. Sept. 29.

Macfarland, Meldrum & Co., 90 Candlemaker Row, Edinburgh, manufacturing chemists. Oct. 1.

Pellow & Jewers, Winchester, dentists. Sept. 16.

Sharp, Tempest & Duckworth, Cloth Hall, Colne, drysalters, wholesale druggists, &c. Oct. 3. Debts by Tempest & Duckworth.

DIVIDENDS DECLARED.

Bennett, Sidney (Bkt.), 13 Queen Street, Mayfair, orthopœdic practitioner. 2nd and final div. ½*d.*; J. C. G. Bennett, 30 Friday Street.

Fraser, Robert W., Portobello, late Cramond, M.D. 5th, 1*s.* 6*d.*; P. Couper's, 47 Hanover Street, Edinburgh, Oct. 30.

Gibson, John C. (Liq.), Droitwich, surgeon. 1st and final div. 1*s.* 3*d.*; D. Shaw, Pierpoint Street, Worcester.

BANKRUPTCY ANNULLED.

Robinson, Rawdon B. (June 15), Dulverton, surgeon. Oct. 31.

THE CHEMIST AND DRUGGIST

COLONIAL BUILDINGS, 44A CANNON STREET, LONDON, E.C.

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Buenos Ayres	.. 2½ dollars.	Mexico ..	.. 2½ dollars.
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Cuba.. ..	.. 2½ dollars.	Prussia ..	.. 10 marks.
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Denmark ..	.. 4½ R. dollars.	South Africa	.. 10*s*.
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Germany ..	.. 10 marks.	Sweden ..	.. 2½ dols. specie.
Greece ..	.. 15 drachmæ.	Turkey ..	.. 50 piastres.
Hamburg ..	.. 8 marks et.	United States	.. 2½ dollars.
Holland ..	.. 6 guldens.	West Indies	.. 10*s*.

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J. ALFRED WANKLYN, M.R.C.S., London,
Formerly Professor of Chemistry in the London Institution;
Joint Author of a Book on Water Analysis, and of the Ammonia Process.

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THE COST OF SCIENCE.

THE strange metaphysic whirl into which scientific men, after all their abstruse investigations into the nature of life and life's conditions, have at last landed us is a sufficiently troubled atmosphere to induce a perplexed student now and then to question whether the results of all this exercise of intellect are worth their cost. When Copernicus proved that the earth was not, as had been so long complacently assumed, the centre of a worshipping universe, but only a little and somewhat unimportant fragment of immeasurable immensity, he did a great work for scientific truth; but none the less did he upset for all time a theory the gratifying and consoling power of which it is next to impossible for us to estimate or even conceive. The realisation of his own insignificance is the bitterest lesson which a man has to learn when he first mixes with the busy world, and this lesson was what was taught to humanity in the aggregate, in the sixteenth and seventeenth centuries, by Copernicus, Kepler, and Galileo. Is it wonderful that popes and kings and peoples should have allied their puny force in the poor, vain effort of trying to keep the earth from wandering off into infinite space, as they doubtless felt it would do, unless they held firmly to the helm? It was a true, but a painful discovery for our worthy forefathers to make when it turned out that the law of gravitation was stronger than the Vatican.

But since that period what a succession of sacrifices have we not been called upon to make of nearly all pleasant superstitious, creeds, or fancies which at one time or another our race has held so dearly. Let us try, for example, to conceive the agony of despair which may have oppressed not a few of the brave old alchemists as amid the weird furniture of their dismal old laboratories in their hours of reverie they realised at moments with vivid perception the utter vanity of their search after the philosopher's stone or the elixir of life. Little recked they of the accidental discoveries which we now prize so highly, and which afterwards proved to be the real and not unsubstantial results of their labours, and which opened paths they never dreamed of. To them was present only the dreary sense that long and laborious lives had been wasted, that the search after truth had been a dead failure, and that the future was a blank. Once every man felt himself, and was inwardly assured, that he was mysteriously linked with one of the planets which he saw as he thought watching him so tenderly from the blue sky above. Telescopes came and roughly snatched this poetic sentiment from the possession of our race. Once the flowers taught all sorts of lessons, and the world read those lessons, as Longfellow says, "with childlike credulous affection." How much of that sort of simplicity is likely to remain in the soul after a course of study in the mysteries of bothrenchyma and parthenogenesis? "Traveller's Joy," "Forget-me-not," and "Passion Flower" were names of meaning in old days, but they had none for men who counted the stamens and classified the inflorescence, so a new system of nomenclature was started, which began somewhat innocently by employing the Greek numerals, but ultimately reached the crowning barbarity of titles like *Wellingtonia* and *Victoria Regia*. Verily our speech bewrayeth us. But it was decreed that the unkindest cut of all should be delivered to our trustful souls by the professors of the new science of biology. The havoc wrought by this interesting study is past all reckoning. Formerly we regarded ourselves as but a little lower than the angels: now we find we are but a step above the monkeys. Once we thought our respectable ancestry *was* a definite fact, even though we might have nothing else left to be proud of: now the theory is received with ringing cheers that we are nothing but animated agglomerations of atoms, brought together by inexorable forces, which, like a million-horse power besom, effect this creation merely for the insane pleasure of sweeping us again almost instantly into practical annihilation. Such is the vaunted "tendency of modern thought." But even this theory is hardly deep enough for some of our far-seeing philosophers, who, with wearisome iteration of "sum-m-ject and om-m-ject," would have us doubt whether our lives are real at all, or whether what we are pleased to fancy our existence is anything more than the distorted dream of a crazy jelly fish.

These are but examples of the ruin of long-cherished faiths which the pursuit of science seems to be working for us. May we not, then, ask with some show of reason whether this pursuit has given us anything like an equivalent for what it has cost? But the question is no sooner put than its folly is apparent. The human mind must search, must enquire, must investigate, no matter whither that investigation leads it. The steps of intellectual progress are, as it has been well said, like a staircase which crumbles behind the march, and leaves an abyss which cannot be retraversed. We cannot stand still; the step on which we rest for an instant crumbles beneath our feet. "Onward" must ever be the motto of the human mind seeking truth. Surely, with such a fact as this staring us in the face, it is a miserably faint heart which clings to the pillars of materialism as if that were the end of the journey, and presses not forward towards that light which we may never see, but which assuredly a future generation will find. Coleridge wrote, in one of his letters, that he had "skirted the howling deserts of infidelity;" and Carlyle forcibly comments on this that he had tried to construct for himself poor Fatamorganas on this hither side instead of pushing across those deserts to the firm land of faith beyond. It is far too early yet to commence the construction of cosmogonies. We know little enough of the phenomena of matter; nothing whatever of the phenomena of mind. The ablest modern guesses have been guessed by other able minds a thousand times previously. Even Professor Tyndall at Belfast found it convenient to express the climax of his ideas in the words of an author whose book is perhaps the oldest of earth's literary possessions. Whether Tyndall's speculations tend to materialism or not is not a matter of world-wide importance, but that an earnest and faithful search after truth will not ultimately land us in that miserable slough is, of all things, most certain. The bio-theological discussions which have lately agitated so many circles, pharmaceutical among the rest, are not half so dangerous as they look. Science, properly so called, will in the end prove an *Alma Mater* to its votaries, and the modest student may with confidence prosecute his labours, and, amid the perplexities which new discoveries unfold, may still confidently, as Campbell has written—

> —— the darkening universe defy
> To quench his immortality,
> Or shake his trust in God.

AN INTERNATIONAL PHARMACOPŒIA.

PROFESSOR ATTFIELD'S LATIN NOMENCLATURE.

By Joseph Ince.

THANKS to Mr. Thomas Greenish (co-delegate with Mr. Sutton, to the International Congress held in Russia), an opportunity is presented of saying a few words upon the general subject, and on the special question of the nomenclature proper to be adopted. I have thought it better, for the sake of clearness, not by way of self-assertion, to speak in the first person and thus to avoid ambiguity of phrase.

The attempt to establish an universal pharmacopœia as a book of reference, and to assimilate, as far as may be, external differences, has always appeared desirable and good; to issue such a work, clothed with compulsory and authoritative formulæ, seems to me, now as ever, a pleasing intellectual amusement, and an effort made to reach a country situated in dreamland.

For nine consecutive years I had the honour to learn French and German according to the miserable plan then in vogue in our public schools. Yet though we failed utterly to acquire the smallest practical use of continental tongues, we stored up a large amount of information about foreign literature and history, and we were familiar with the lives and writings of the men and women of countries other than our own. I cherished then the vain imagination that, when mutual prejudices were swept away, and certain concessions made on either side, at least two great nations, France and England, might be one. Afterwards I became a resident in the gay capital: not in one of its Anglicised localities, but close by the famous elephant described in "Les Misérables"; and I was reluctantly compelled to recognise how deep, how broad, and how eternal were the essential points of separation. It subsequently fell to my lot to examine, critically and minutely, every foreign pharmacopœia that has been published during the past twenty-five years, and one of earlier date. Specially, the old Paris Pharmacopée; the modern Codex (Napoléon III.); the Prussian, published at Berlin (1846); the Austrian (new); and the Pharmacopœia Germanica.

To these may be added American pharmacy, passim, and the copy of the Greek Pharmacopœia now in the Society's possession.

I am forced, from the constant consultations of these compilations, to come to but one fixed idea, that while assimilation in things common to chemico-pharmacy is a desideratum, uniformity of pharmaceutical practice is impossible.

An intense quickening impulse was given to international thought by the Great Exhibition of 1851. There were assembled, in Hyde Park, all people that on earth do dwell. Infinite benefit was derived, the effects of which are daily more visible. Manufacturing trade; the arts and sciences and commerce are indebted for their development to that gathering. The poetical sentiment was not wanting—it was the lion reposing with the lamb—a happy family in which incongruous elements were blended. But the Englishman went back to his suburban villa, drank stout, went to his parish church, and remained a genuine Briton. The Russian betook himself to the north, and was still a Russ; the Frenchman regained his beloved city, and with his café and his claret never raised the smallest suspicion that he was not French. English, Russian, French, and the whole catalogue of continental varieties of the human species, may meet together in friendly congress and decide what name they shall call blue vitriol and Epsom salts; they may determine by what arithmetical arrangement they may express the fact that 2 and 2 make 4; but they waste their energies when they seek to lay down laws on pharmacy and its therapeutical applications which shall apply to men born in different countries, living under different influences of climate, habit, and constitution, and with hereditary distinctions, physical, geographical, and moral.

Some confirmation is given to this view from the fact that no two British pharmacists have yet been found who could agree perfectly about their own British Pharmacopœia.

But while there exists such strong reason for rejecting international legal authority, there is none whatever why we should not try to assimilate, simplify and rationalise things general and of universal acceptance. Great praise should be awarded to Mr. Greenish for having brought this important matter prominently into notice. In what can we unite, and are there any common platforms on which we can meet?

Some points have been decided. The metrical system of weights and measures commends itself for universal adoption.

Preparations of a compound nature will be less easily misunderstood, and will stand a chance of general employment when composed of the fewest ingredients—the strangely complicated syrups of the Codex, together with its heterogeneous electuaries, may wisely disappear. The Espèces and some few distillates of German and Austrian formulæ may share the same fate—degrees of temperature may be indicated by one thermometric scale; and England may relinquish proof spirit and adopt the American estimation for absolute alcohol. Lastly, precautions may be taken to alleviate the consequences of the Tower of Babel. All these preliminary considerations have been discussed at St. Petersburg, with the exception of the alcohol standard, and chiefly has it been decided with no dissentient voice that the new proposed International Pharmacopœia shall be in Latin. Under such circumstances, for upon this hinges the entire argument, what is the proper nomenclature to be introduced? That was the sole question before the audience at Bloomsbury Square, on Wednesday, November 4, 1874.

Mr. T. H. Hills was in the chair, and **Mr. Greenish** opened the discussion in a written paper, thus:—

The Chemical Nomenclature Proper to an International Pharmacopœia.

An International Pharmacopœia has for several years been an idea floating before the eyes of the pharmacists of every European nation. It had been little more than an idea until the Congress in St. Petersburg, grappling with the difficulty, aimed at reducing its requirements to some tangible form. How far success has attended these efforts will be left for time to determine. There certainly was not wanting at that Congress either the energy or the will, but the difficulties were great. Some points on which a definite opinion was pronounced may be mentioned.

The Latin language is to be restored to its former position, and will, I believe, be very generally welcomed as an old familiar friend. The Russian pharmacist may not understand the English directions, and the English pharmacist will most certainly not understand the Russian, but both should be conversant with the Latin.

The metrical system of weights and measures will be introduced, and the greatest simplicity is recommended in galenical preparations. The minimum of the active principle in narcotic and drastic drugs permitted will be stated; also the maximum of impurity allowed where absolute purity is not thought necessary.

The very general agreement and unanimity on these points indicate progress—one step at least in the right direction; but there is still a question on which the Congress did not pronounce a definite opinion. I refer to nomenclature, the object in view being to secure a uniform and fixed nomenclature, the one best adapted for an International Pharmacopœia.

The decision was left to the Permanent International Pharmacopœia Committee, whose seat is in St. Petersburg, a few of the delegates requesting that the system of Berzelius should receive consideration.

Since the return of the delegates to England they have received a letter from that Committee, requesting that each Pharmaceutical Society should state what nomenclature it considered best adapted for an International Pharmacopœia.

Thinking it probable that the favourable opinion of the Berzelian nomenclature expressed at the Congress by a few might be very generally entertained, I was induced to write to the President on this point, and also with the view of eliciting what really was meant by the system of Berzelius, and at the same time requesting a few examples, applicable to the chemicals of the Pharmacopœia. In reply, he states that a few delegates only suggested the nomenclature of Berzelius, and that in his opinion it was not the best nomenclature for a pharmacopœia. He says further, that if adopted for a pharmacopœia, "acetate of lead" would be written "acetas plumbi," "muriate of quinine" "murias quiniæ," and "muriate of morphia" "murias morphiæ," which he considers would be very objectionable. He adds that the nomenclature of the Austrian Pharmacopœia was formerly that of Berzelius, but it is now altered, not from a theoretical but from a practical necessity. Several mistakes had occurred in dispensing; the last case of poisoning was due to an assistant having dispensed from a bottle labelled "murias morphiæ," which he had mistaken for "murias quiniæ." He thinks that had the one been labelled "morphiæ murias," and the other "quiniæ murias," the probability is the error would not have occurred.

I may add that I have received a letter on this subject from a high authority, Professor Dragendorff, of the Dorpat University, Russia, one of the delegates at the recent Congress. He also objects to any system of such names as carbonas kalicus, in which the metal or basis occupies a secondary place, and agrees, he says, in principle with the names such as potassii carbonas, the employment of which Professor Attfield urged in his Paper on Nomenclature, read before this Society in 1871.

It must, I think, be admitted as desirable that the nomenclature should not conduce to errors in dispensing; that the system adopted should be generally acceptable; that it should be as uniform and permanent as possible; and yet that the Pharmacopœia should be abreast of the science of the day. The question, therefore, before the meeting is what chemical nomenclature it considers the best to be adopted in an International Pharmacopœia? and to this question the pharmacists of Great Britain, in common with those of other countries, are requested to furnish an answer.

Mr. Greenish was followed by **Professor Attfield**, also in a prepared address. He began with stating that the subject had been already discussed before the Society, but now apparently no choice was left them in the matter, as the production of an International Pharmacopœia had been formally decided, and they had only to deliberate upon its details. Mr. Sutton rose and said that this was by no means the case. It was still an open question, and nothing had been definitely arranged. Professor Attfield expressed his satisfaction at this remark, and proceeded to read his Paper:—

The Chemical Nomenclature of an International Pharmacopœia.

The question now put to English pharmacists by the Permanent International Pharmacopœia Committee lies within narrow limits. We are not asked to discuss the subject of an International Pharmacopœia, nor its whole nomenclature, but simply its chemical nomenclature, or, rather, the Latin chemical nomenclature appropriate to an International Pharmacopœia.

Before answering this question some deliberation is necessary. Our own British interests must not alone be considered. The chemical nomenclature of an International Pharmacopœia, printed in the Latin language, should harmonise as much as possible with the Latin nomenclature of every national Pharmacopœia, of which it is more or less the international representative, and when translated into the respective vernacular languages, should clash as slightly as possible with the chemical names commonly met with in those languages.

On one point, at the very outset, I have a definite and strong opinion. The nomenclature under discussion should reflect modern unitary ideas, and not the old binary or dualistic hypotheses respecting the constitution of chemical substances. Nitre must not be termed potash nitrate, or nitrate of potash, or nitrate of oxide of potassium (KO,NO_5 old atomic weights, or K_2O,N_2O_5 new atomic weights), but potassium nitrate, or nitrate of potassium (KNO_6, old atomic weights; or KNO_3, new atomic weights). Blue vitriol must not be regarded as copper oxide sulphate, or sulphate of oxide of copper (CuO, SO_3, $5\,HO$), but as copper sulphate, or sulphate of copper ($CuSO_4$, $5\,H_2O$). For the modern unitary views are not only held by nearly all chemists in all countries, and taught in all English and nearly all foreign educational chemical works, but are recognised officially either in the names, synonyms, or notation of most pharmacopœias, and at most pharmaceutical and medical examining boards. In the Austrian Pharmacopœia appears magnesium sulphuricum, while magnesia sulphurica and sulphas magnesia occur only as synonyms. In the German Pharmacopœia we find ammonium carbonicum, not carbonas ammoniæ. In the French Pharmacopœia the sel d'Epsom is still termed sulfate de magnésie, but sulfas magnesicus is given as a synonym. In the British Pharmacopœia, modern chemistry is recognised by the insertion of modern chemical formulæ side by side with the old, and that in the next edition a very simple and effectual modification of modern chemical nomenclature should be introduced is admitted with singular unanimity by the leading chemical, medical, and pharmaceutical authorities of Great Britain, and all the English journals of medicine and pharmacy. It will be for the International Committee to ascertain the nomenclature of pharmacopœias generally, and to collect opinions respecting projected alterations in the chemical nomenclature of such pharmacopœias, but I may just add a quotation from the preface of the recently issued United States Pharmacopœia :—"Some alteration has been made in the chemical nomenclature of the pharmacopœia, in order to place the work in accord with the progress of chemical science. Without adopting the new nomenclature of chemistry to its full extent, such modification of the former designation of substances has been introduced as to give uniformity; all the salts of the alkaline metals are designated as of the particular metal, and not of its oxide; thus, barii carbonas is substituted for baryta carbonas, calcii carbonas præcipitata for calcis carbonas præcipitata, and potassii citras for potassæ citras. These changes have been made with deference to the nomenclature which is now being employed by chemists, and the modifications thus made will probably soon be the language of pharmacy." I repeat that, in my opinion, some form or forms of modern chemical nomenclature should alone occupy the leading place in an International Pharmacopœia. In such a work of reference synonyms may freely be placed under the leading name of a salt, but the names at the heads of the sections should be consistent with the well and widely accepted modern unitary chemical ideas. If this course be wisely carried out, the proposed International Pharmacopœia will do much to promote harmony, if not identity, in the chemical nomenclature of pharmacy throughout the world.

Assuming, then, that the claim for modern chemical nomenclature in the International Pharmacopœia is admitted, the second point for consideration is, which modern arrangement or order of Latin words should be employed in the system of names? Shall we have sulphas cupri, sulfas cupricus, cupri sulphas, or cuprum sulphuricum? Each of these names already occurs in one or other of the more recent pharmacopœias, and each is in accordance with modern chemical views. Shall we have nitras potassicus, nitras potasii, nitras kalicus, nitras kalii, potassium nitricum, kalium nitricum, kalii nitras, or potassii nitras? Each of these, or an equivalent, is to be found in recent pharmacopœias, and each is a modern name. The President of the International Congress, lately held at St. Petersburg, draws attention to the Austrian Pharmacopœia, and prefers such a name as morphinum hydrochloricum rather than the synonym chlorhydras morphicus, also given in that pharmacopœia, because, as a matter of practical necessity in the avoidance of mistakes, he would have the more important word placed first in the name, the leading word being more likely than the terminal word to be correctly caught by the eye of a dispenser. I agree with Mr. Von Waldheim in the opinion that the name of the basylous constituent of the salt should come first in the name, not because of its medicinal or toxicological importance, for occasionally the acidulous element, or group of elements, is the more powerful, as in sodii arsenias, but because in the nomenclature of the majority of pharmacopœias, old or recent, the name of the basylous element is so placed, and because uniformity of plan in such a matter is extremely desirable.

Excluding, therefore, names in which the acidulous constituent is placed first, as sulphas cupri, sulfas cupricus, or nitras potassicus, there remains the question, which of the two or three varieties of modern chemical nomenclature, in which the metal or basylous constituent has the leading place, is best worthy of selection for employment in an International Pharmacopœia? Shall the authors of that work employ the term cupri sulphas with English-speaking nations, or adopt the German form of the name, cuprum sulphuricum? Shall we have potassii nitras, or kalium nitricum? Would the French like to see their protoiodure de mercure and deutoiodure de mercure termed hydrargyri iodidum viride, and hydrargyri iodidum rubrum, respectively, or hydrargyrum subiodatum and hydrargyrum iodatum rubrum; their own Latin synonyms being ioduretum hydrargyrosum and ioduretum hydrargyricum?

One or other of the two varieties of modern chemical nomenclature, of which the names just given are illustrations, will probably be selected for use in the International Pharmacopœia. Before deciding which is the better, a glance over the following more extended lists may be useful :—

I. Latin Chemical Names employed in the Pharmacopœia of the United States of America.	II. Latin Chemical Names employed in the German or Austrian Pharmacopœias.
Ammonii carbonas	Ammonium carbonicum
Ammonii chloridum	Ammonium chloratum
Argenti nitras	Argentum nitricum
Atropiæ sulphas	Atropinum sulphuricum
Bismuthi subnitras	Bismuthum subnitricum
Calcii carbonas	Calcium carbonicum
Calcii chloridum	Calcium chloratum
Calcii phosphas	Calcium phosphoricum
Cupri sulphas	Cuprum sulphuricum
Ferri lactas	Ferrum lacticum
Ferri phosphas	Ferrum phosphoricum
Ferri sulphas	Ferrum sulphuricum
Hydrargyri chloridum corrosivum	Hydrargyrum bichloratum corrosivum
Hydrargyri chloridum mite	Hydrargyrum chloratum mite
Hydrargyri oxidum flavum	Hydrargyrum oxydatum flavum
Hydrargyrum ammoniatum	Hydrargyrum bichloratum ammoniatum
Magnesii carbonas	Magnesium carbonicum hydro-oxydatum
Magnesii sulphas	Magnesium sulphuricum
Manganesii oxidum nigrum	Manganum hyperoxydatum
Morphiæ acetas	Morphinum aceticum
Plumbi acetas	Plumbum aceticum
Potassii acetas	Kalium aceticum
Potassii bicarbonas	Kalium bicarbonicum
Potassii bitartras	Kalium hydrotartaricum
Potassii carbonas	Kalium carbonicum
Potassii et sodii tartras	Kalium natrio-tartaricum
Potassii nitras	Kalium nitricum
Potassii iodidum	Kalium iodatum
Quiniæ sulphas	Chinium sulphuricum
Sodii chloridum	Natrum chloratum
Sodii sulphas	Natrum sulphuricum
Strychnia	Strychnium
Zinci sulphas	Zincum sulphuricum

Either of these two systems of names is in accord with the existing state of chemical science; each is already employed by great nations. Which should be adopted in an International Pharmacopœia?

The names found in the United States Pharmacopœia will doubtless be introduced into the next British Pharmacopœia. All authorities, as I have said, are agreed on this point; and English-speaking pharmacists therefore would naturally prefer these Latin names—those of column I. The French, also, would probably prefer them, as more consistent with the genius of their own language. On the other hand, German-speaking pharmacists would prefer such names as those now employed in the Austrian Pharmacopœia—those given in the second column of the foregoing table. Would either of the two classes of pharmacists just mentioned be likely to give up the use of one of the two sets of names in favour of the other? I think not. Irrespective of the merits of either variety, and the advantages of international uniformity of pharmaceutical nomenclature, I am convinced that the general bodies of medical practitioners and pharmacists could not be brought to accept any general alteration in a whole nomenclature. This subsidiary question need not be discussed; it is a case of *non possumus.*

Here we may leave the matter in the hands of the International Pharmacopœia Committee. In the general body of the work one or other of these two varieties of modern chemical nomenclature will, in my opinion, have to be employed. Perhaps, however, in the headings of sections both varieties might be represented. Thus, ammonii chloridum *vel* ammonium chloratum. This would be the leading name, printed in uniform capitals; then would follow synonyms (of which there should be the fullest number), then characters, tests, and any processes that may be introduced, and so on to other matters of the section. Finally, I trust that the work will have a copious alphabetical index, containing all synonyms as well as chief names.

The President said that a most important subject had been submitted to their notice; there were many present well qualified to offer an opinion—he would call on their own Professor of Pharmacy to state his views.

Professor Rodwood *

Entirely concurred in what had been stated by his colleague, Professor Attfield, who for several years past had taken much interest in this subject, and who had certainly contributed greatly towards the establishment of a greater amount of uniformity and consistency among pharmacists and medical men with regard to the chemical nomenclature of medicines than previously existed. Indeed, so far as he could gather, they were indebted to him in great measure for the introduction. on the other side of the Atlantic, in the United States Pharmacopœia, of the system which he had advocated some years ago. He (Dr. Redwood) had previously expressed his opinion as being favourable to such a change as had been suggested by his colleague—in principle, if not in every particular detail; there were some names, if he remembered rightly, with respect to which they had not entirely agreed, but he did not doubt that whenever a new edition of the Pharmacopœia came out, a similar nomenclature to that now adopted in America would be adopted. It must be borne in mind, however, that in the adoption of any new system of nomenclature as applied to pharmacy, they were limited to a considerable extent by what was practicable; the nomenclature of the Pharmacopœia was to be used by medical men, and to be understood by pharmacists; names were but representatives of things, and when persons had once thoroughly learned the language, and become acquainted with the things which certain names represented, it was not an easy matter, especially in mature life, to change the language they had been in the habit of employing. Now, the medical men in most extensive practice were not young men; but, generally speaking, men who had acquired their scientific knowledge some half century ago, and who were not prepared to go to school again. In recommendation of the proposal made some years ago by Dr. Attfield, and now again brought forward, it may be said that while it would reconcile the nomenclature of the Pharmacopœia with modern views in chemistry, it would at the same time make the system of names more specific, clear, and consistent with itself, and, which was a still greater recommendation, it would involve a very small amount of change, one which would be inappreciable as used by medical men, for the abbreviated names as recommended would not differ from those now in use. The difference was in the termination, and the termination generally, of the basylous constituent of a salt. He had indeed found, in discussing the matter with medical men, that very little difficulty would be found in adopting it. As the English language was spoken over so large a portion of the globe, he hoped and thought they might have reason to expect that the nomenclature adopted in the proposed International Pharmacopœia might be one which, while applicable to the Latin language, would be strictly applicable to English also, and would necessitate very little change on the part of English physicians and pharmacists. He was very glad that the subject had been introduced by one of the members of the recent Congress at St. Petersburg, and hoped the opinion of the members would go forth almost unanimously upon the matter.

Mr. T. B. Groves (President of the British Pharmaceutical Conference) said it appeared to him that if any change were made in the nomenclature of the Pharmacopœia, it ought to be a final one; and with that object they ought, if possible, to avoid any approach to adopting a particular chemical theory. Chemical theories were changing from day to day; probably before the end of the present generation a very serious alteration indeed would take place, and therefore. if any nomenclature were adopted as expressive of the theory of the day, it would probably soon require another change. From this consideration he was rather inclined to look with favour on the nomenclature adopted in the German Pharmacopœia. Many of the terms certainly sounded barbarous to an English ear; perhaps they might be softened down, but they did not express any theory.

Mr. Joseph Ince said he would limit his remarks entirely to the Latin nomenclature of the proposed International Pharmacopœia. He disagreed with the views expressed by the last speaker, for the following reasons:—The proposed Pharmacopœia was to be in Latin. and he believed the time would come when the official Pharmacopœia of every country would again be issued in Latin, though an edition in the vernacular might also be published; consequently, in framing the nomenclature to be employed, the genius of the Latin language should be followed as closely as possible, and no attempt should be made to depart from it. Now, looking at the two lists of names given by Professor Attfield from this point of view, there could not be a shadow of doubt that those which had been adopted in the United States must be followed, whilst those in the other column could not, if the book was to be published with any pretensions to correct Latinity. For instance, such terms as argenti nitras, calcii carbonas, were precisely what one would expect to find in a work written in Latin, whilst the names contained in the German and Austrian Pharmacopœias were to a considerable extent German and Austrian adaptations. To take the Latin for distilled water: if you followed the English form exactly you would have destillata aqua, but following the Latin construction it would be aqua destillata. Looking at the matter simply from this point of view, there was an immense superiority in the names suggested by Professor Attfield, which he hoped therefore to see adopted.

Mr. Martindale desired briefly to call attention to one or two instances of the Berzelian nomenclature; the perchloride of mercury was called chloretum hydrargyricum, whilst calomel was called chloretum hydrargyrosum. How was this to be modified to suit prescribers? The same thing occurred with regard to the two chlorides of iron, chloretum ferricum and chloretum ferrosum. The question was whether they should adopt a nomenclature with inflexions for such compounds at the termination of the words, or as prefixes. He thought the prefixes were certainly much better adapted to the contractions used in prescriptions, and they were generally used both in England and on the Continent. He quite agreed with what had been said by Professor Attfield as to the nomenclature of Berzelius, which had been used in many continental pharmacopœias. Such names might be given as synonyms, but it would be scarcely possible to adopt them as headings.

Mr. Francis Sutton desired to state most unreservedly that the whole question of an International Pharmacopœia was quite open to their discussion, and would so remain for a long time. The Congress had, very wisely in his opinion, arranged that their meetings should only occur at intervals of four or five years, and as to this particular question, Mr. Grecnish and himself were simply commissioned to bring it before the Society, in order that all members might express their opinions freely as to the nomenclature which should be adopted. What was agreed to at the Congress was this, that if an International Pharmacopœia were to be formed—for that was not yet settled, and he was not quite certain whether they would be any the better for one—but assuming such a thing should be considered advisable, that it should be as short and accurate as possible, so as to embrace all those things as to which differences of practice might seriously affect the public health. They could not introduce numerous articles which were in common use abroad, but they wanted some universal system of using powerful drugs, so that a prescription would be understood in the same sense all over the world, and that, perhaps, might in the course of a few years be attained. Foreigners had notions of their own about nomenclature, which were sometimes very different from those current in England; but at any rate, if Latin were used, as Mr. Ince had said, it ought to be as good Latin as possible. To show the prevalent misconceptions about this matter, he might mention that a member of the Congress had stated that the English method was to say acetas plumbi, whereas he thought they should say plumbum aceticum, which was more correct, because the most important name of the two came first. It was, however, quite new to him (Mr. Sutton) to hear that the English *did* say acetas plumbi; and inasmuch as they said plumbi acetas they were substantially at one with their critic. To show how important it was that they should consider this subject, one very enlightened member of the Congress had remarked that the English were very heterodox, but unfortunately they were so important that they could not be shut out. Therefore, if they could arrive at anything like uniformity of opinion, there was no doubt it would be treated with great respect, and very probably adopted.

Mr. Greenish said that one or two of the members of the Congress mentioned the system of Berzelius, and the Permanent Committee at St. Petersburg was requested to consider it. When they left that city, it was thought that the determination of this point would be left mainly to that Committee; but since then a letter had been received in which it was particularly mentioned, each society being requested to send an answer as regards the nomenclature. It appeared that the Berzelian nomenclature was mentioned by a delegate from Denmark.

The President, in closing the discussion, reminded the members that the Congress had been invited to hold its next meeting in London, before which time he hoped that they might have arrived at some definite understanding.

Two points in the opening Paper are indistinct, and both relate to the nomenclature of Berzelius. The President of the Congress states that were it adopted acetate of lead would be written acetas plumbi; muriate of quinine, murias quiniæ; and muriate of morphia, murias morphiæ, which would be very objectionable. It might be added, further, that these terms would be incorrect, for one is not the Latin of the other any more than redactum ferrum is the correct Latin expression for the English reduced iron, or fer réduit. We must not dictate to the old Romans the manner in which their adjectives should be placed. Moreover, it is difficult to see why murias quiniæ should in itself be less liable to error than quiniæ murias: had the misadventure turned upon the substitution of the word zinci the mistake would be intelligible.

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* The speeches, with slight alteration, are extracted from the *Pharmaceutical Journal.*

The main question resolves itself into very narrow compass. So long as Englishmen produced for their own national wants a British Pharmacopœia they were to some extent at liberty to choose a nomenclature of their own—it was left to the wisdom of its compilers to act according to their discretion, and to decide in what best manner nomenclature should express chemical theories. While France published a Codex in the vernacular considerable latitude was allowable in the choice of the terms employed. Germany could use accommodated Latin phrases, and Austria could accept or reject any specific system of nomenclature. But from the moment that it was decided to produce a Latin book, which, being neither English, French, German, nor Austrian, but International, and therefore should be published in the language of Cicero and Pliny, entirely different considerations were involved. It will fulfil its intention just in proportion as it conserves and embodies the genius of the language in which its directions are meant to be conveyed. We are all agreed on the nomenclature of many of the so-called elements, such, for instance, as ferrum, hydrargyrum, potassium, and sodium. We agree that *ate* shall change into *as*—and that therefore carbonas, nitras, sulphas, and the like, may be considered as true Latin for a carbonate, nitrate, or a sulphate. We are agreed on most other terminations, and it is the construction that remains in doubt. Why, then, not follow the known rule, that in English the qualifying descriptive word comes first, the word qualified comes last, and that in Latin this process is reversed. For example, take ferri sulphas. There is an endless list of ferrum preparations, but all are but iron exhibited in various combinations—put ferrum first and the chemical form in which it is presented second; the whole list may be enumerated with identically the same construction, and we need not wander into ingenious variations of nomenclature by which to convey the teachings of modern theories.

Who amongst us would guess with facility what terms like these Prussian names may mean—Chinium hydrochloratum; Tartarus depuratus crystallisatus; Natro-Kali tartaricum?—and what shall become of our international prospects when these mediæval relics begin to wander at their own sweet will, and we find unfortunate potassii iodidum, a nomenclature no one can mistake in the Protean shapes of kalium iodatum, kali hydroiodicum and iodetum kalicum? My young readers would as easily discover the modest viola tricolor under the guise of Stiefmütterchenkraut as they would many simple compounds in their debased Latinity. I turn with satisfaction to the Latin chemical nomenclature of Professor Attfield. It is not too much to say that he has anticipated international labours. The system he has proposed is clear, definite, and simple—strictly in accordance with the acknowledged rules of construction, and is especially serviceable to the medical profession, as it will not clash with their previous classical studies. The plan has received the imprimatur of the United States Pharmacopœia, no small compliment to the English author. So Latin, this *dead* language, is the only bond which can re-unite the living nations of the world. Without its aid science, enthroned on whatsoever continent, must remain as much upon its own little intellectual island as does Great Britain geographically, and nomenclature, based on no fixed principle, will shift with every wind of doctrine. We shall the soonest understand each other and our art, as we go back to the simplicity and full integrity of the language bequeathed to us and all men by the Augustan age.

AT THE inaugural meeting of the session of the Midland Medical Society, held at the Great Western Hotel, Birmingham, Mr. Oliver Pemberton presiding, Professor Humphry, of Cambridge, delivered a lecture on "Ancient British Skulls."

Trade Memoranda.

THE DEATH (from the same cause) of Mr. Griffiths, chemist, Brighton, is also announced.

MR. W. ROBSON, late of Tulford, Yorkshire, has opened a shop at Great Grimsby.

MR. JOHN THROSSELL has succeeded to the business lately carried on by Mr. W. T. Linay, at 116 Fitzroy Street, Cambridge.

MESSRS. INGRAM & Co., mineral water importers, have removed from Bucklersbury to fine and commodious premises, 219 and 220 Upper Thames Street, E.C.

MESSRS. STUART & OLDFIELD, oil merchants, Bristol, have dissolved partnership. Debts paid by Oldfield & Co., Broad Plain, Bristol, to whom the business has been assigned.

MR. ATKINSON has taken the business lately carried on by Mr. Faulding, of Edward Street, Sheffield, who has mysteriously disappeared.

THE DEATH is announced (by consumption) of Mrs. Emma Jackson, who has carried on the business of chemist and druggist, at Scarborough, since her husband's death some three or four years ago.

MR. TIMOTHY, who for many years carried on the business of chemist and druggist at Reading, Berks, has retired from business. He is succeeded by Mr. Hill, formerly assistant to Mr. Wilcox, of Oxford Street.

WE have received samples of Messrs. M'Master, Hodgson & Co.'s "Graphic" ink, which flows easily from the pen, and is of a fine black colour. It is well got up for sale, and supplied either as copying or plain writing ink.

MR. SIDNEY CAMPKIN, chemist, of Cambridge, had a narrow escape of being burnt out on the evening of November 5. His next-door neighbour's house was burned completely, and considerable injury done to Mr. Campkin's premises.

MESSRS. HANNAY & Co. have opened a very handsome branch establishment in Edinburgh, at 40 Dublin Street. Mr. Thomson, late of Messrs. Bullock and Reynolds's, has undertaken the management.

MR. T. KEMP, drysalter, &c., of Ashted Row, Birmingham, has taken into partnership Mr. Tabberner, a gentleman who has had the management of the business for a series of years. The firm will be carried on under the style of Kemp & Tabberner.

MR. J. F. EDISBURY, of Wrexham, has lately purchased the business for many years carried on by Mr. J. Broughton, High Street, Wrexham. This makes the fifth old-established chemist's business in Wrexham which Mr. Edisbury has bought. He has recently crected new premises in the centre of the town, where he carries on the combined businesses.

MESSRS. LAWRENCE & Co., of 485 Oxford Street, the proprietors of Brodie's Corn Solvent, have sent us a letter from which we extract the following passage, gratifying to ourselves as well as to them:—"That a good thing will eventually make its way must be in the experience of most people, and we are pleased to be able to say that our article has on its merits alone achieved a success beyond our expectations. Messrs. Rhoads & Harris, of Philadelphia, after trading with us for one year, were so pleased with the article and with its increasing sale that the head of the firm came over here especially to make a contract with us, and they have secured the sole agency for the United States, on condition of taking not less than 50,000 packets a year. We are pleased to be able to add that Brodie's Remedy was first brought under their notice through our advertisement in THE CHEMIST AND DRUGGIST."

A FAIR share of municipal honours seems to have fallen to the members of the pharmaceutical profession this year. The following are those which have been reported to us:—

Mr. S. R. Atkins, of Salisbury, has been elected Mayor of that city.

Mr. Alderman Maltby, chemist, Lincoln (and brother to the late Mayor), has just been chosen Mayor of that city.

Mr. Joseph Terry, of the firm of Terry & Co., York, has been elected Lord Mayor of York.

Mr. Alderman Porrett, chemist, has been elected Mayor of Scarboro'.

Mr. James Hamilton (Hamilton & Galbraith, chemists), Glasgow, was elected, after a contest, by a large majority, to represent the fourth ward of that city in the municipal council.

DR. CLIN'S DRAGÉES OF MONOBROMIDE OF CAMPHOR.

Monobromide of camphor is a definite chemical compound, formed by the substitution of one equivalent of bromine for one of hydrogen in the camphor. It crystallises in beautiful silky needles. It has an odour which has been described as resembling camphor mingled with mouldy wood.

The medicinal properties of this somewhat new remedial agent have been studied more closely in France than in England. Dr. Bourneville especially has investigated its physiological properties with much patience and skill. After a series of experiments on Guinea pigs, rabbits, and cats, he observed that the monobromide of camphor incontestably possesses hypnotic properties, that its chief action is on the cerebral system, that it diminishes the number of beatings of the heart, and also of the inspirations. He concluded, therefore, that it was indicated therapeutically whenever it was desirable to produce a sedative effect on the circulatory system, and especially on the nervous cerebro-spinal system. The medicine has been carefully tested in the Paris hospitals, and with most favourable results in cases of spasms, sleeplessness, paralysis, hysterics, and in coughs which prevented sleep. In all these experiments the dragées of Dr. Clin, which we are now noticing, have been employed. The *Gazette des Hôpitaux* remarks of these—"Each dragée contains exactly 10 centigrammes of bromide of camphor, enveloped in a thin coating of sugar, which at the same time preserves the medicine, masks the odour and taste, and permits it to be swallowed with ease. The dragées very rapidly dissolve in the stomach." Another reason for administering the bromide of camphor in this form is that, though insoluble in water, it is quickly affected by the air. The dose, too, is by their use strictly regulated. From two to eight dragées have been administered, according to the nature of the case.

Dr. Clin's dragées are supplied in England by the representative of the house, Mr. Dufourcet, 26 Great St. Helen's, London

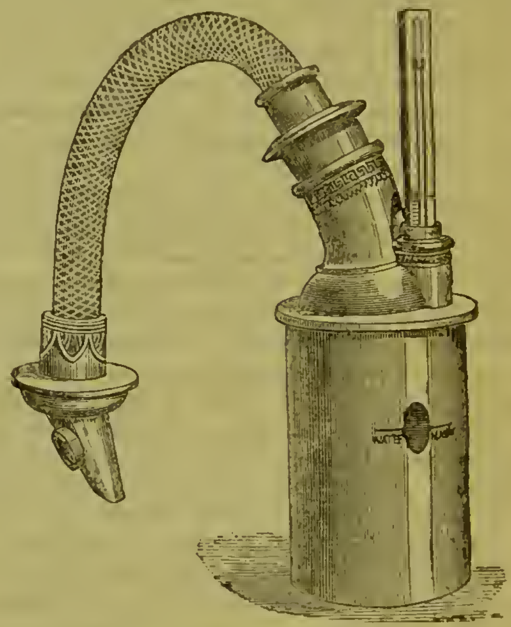
RIMMEL'S PERFUMED ALMANAC.

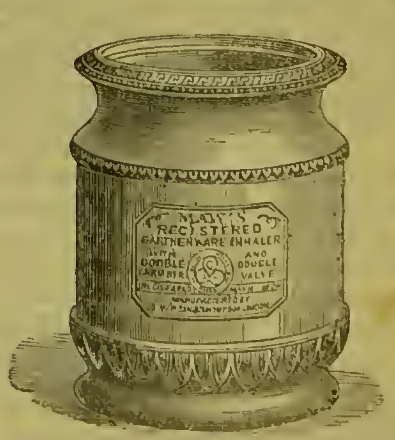
As usual at this season, Mr. Rimmel's perfumed almanac makes its appearance. The designs this year represent "The Hours," Morning, Noon, Evening, and Night. It makes a beautifully scented sachet. But in addition to these, the eminent perfumer has this year provided two other sets of fancy and perfumed almanacs which form elegant little fans. The first, to retail at 1*s*., presents an excellent series of designs, humoursouly representing the signs of the Zodiac. The sketches are really comic, without a shade of vulgarity.

The other almanack, also in the form of a fan, by an ingenious device is made to spread out at once and exhibit a rich abundance of birds and flowers, in the midst of which are the various kind wishes appropriate to the season now approaching. This will retail at eighteenpence.

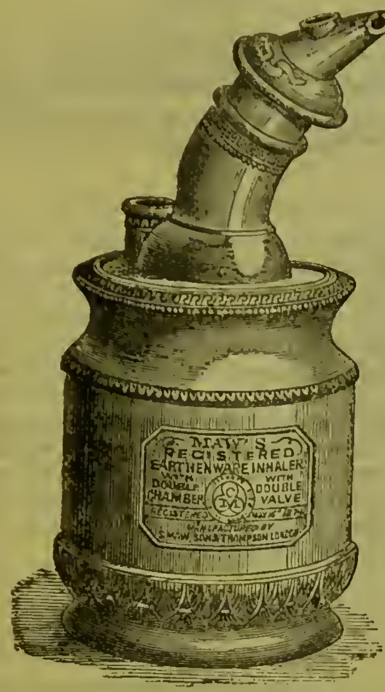
MAW'S NEW INHALER.

We represent in the engraving the new earthenware inhaler which has lately been registered by Messrs. S. Maw, Son & Thompson. In the ordinary form of inhaler, the hot water is hardly poured into the vessel, before the sides thereof become too hot to suit the comfort of either patient or attendant, whichever may have to hold it. By constructing the apparatus in two chambers, with a



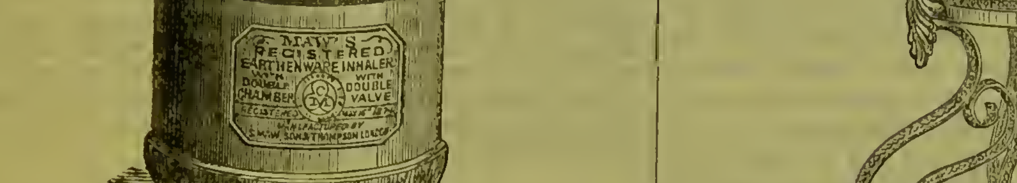


space between, this inconvenience is completely obviated. The next engraving represents the inhaler when the separate parts are put together. It will be noticed that it is made in two forms, one with a single mouthpiece, the other with an elastic tube. A thermometer is also provided if required for inhalations ordered at a given temperature. By means of this double chamber arrangement the heat is retained for a longer time than in the ordinary form.



ROBINSON'S DENTAL SYRINGE.

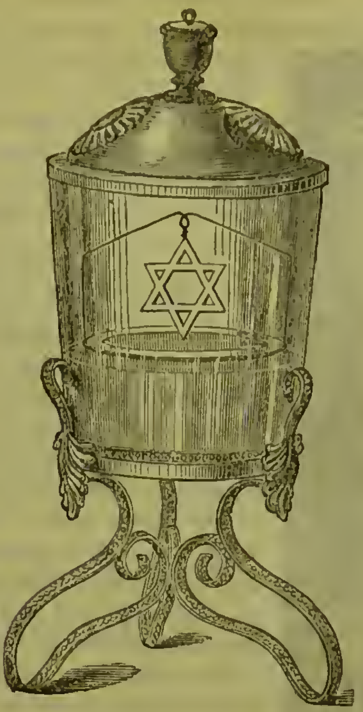
Mr. Robinson, of Pendleton, Manchester, will doubtless add another to his several successes by the introduction of the dental syringe figured above. The object is to apply a toothache preparation to the exact seat of the pain, and by this dental syringe that object can be at once obtained. The instrument consists of a narrow glass tube covered at the point by a brass cap, and connected with an elastic bulb. A drop of the liquid can be applied to any hollow by simply removing the cap and directing the tube to the affected nerve. The syringes are well got up and sell for sixpence each.



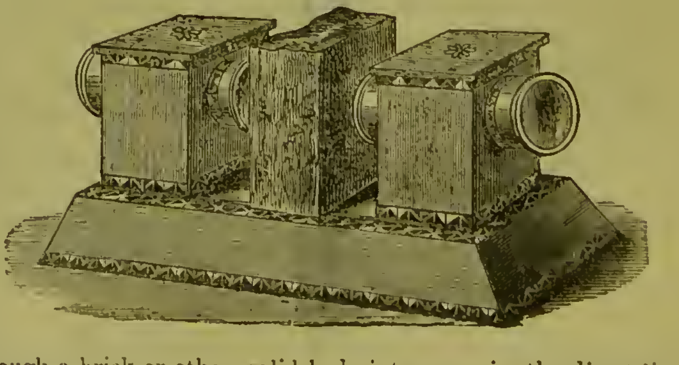
THE STEREOSCOPIC COMPANY'S NOVELTIES.

New Perfume or Disinfecting Lamp.

We have had the opportunity of examining the novelties about to be introduced for the Christmas season by the Stereoscopic Company, and find among them at least one which is well worth a permanent place among the sundries of a well-supplied chemist's stock. It will be introduced as "The Star of Mystic Fire." The form of the apparatus, which is elegant, is shown in the engraving. The star suspended in the vessel is of platinum. This is quite readily heated to redness, and will retain its incandescent glow for hours, as long indeed as there is any perfume or other spirituous solution to evaporate, or until the draught is stopped by turning the cover on the top. The varying currents of air cause the star to glow with more or less brilliancy, and to anyone not acquainted with the principle of action herein lies a mystery. Meanwhile, of course, the perfume is slowly evaporating, and diffusing itself through the apartment. The lamp is no less applicable to disinfectant than to perfumery purposes, and from its usefulness, no less than for its prettiness, it must command a large and permanent sale.

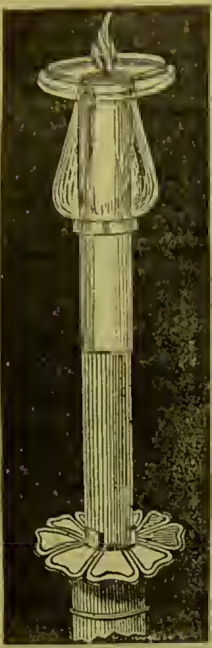


The Improved Cycloscope gives an astonishing optical effect. To see through a brick wall or to look round corners has hitherto been regarded as the most impossible of all impossible visionary feats. With this instrument, however, the difficulty is completely conquered. By a scientific arrangement of mirrors an object at one end of the apparatus is reflected in its proper position at the other end though a brick or other solid body intervenes in the direct line of vision.



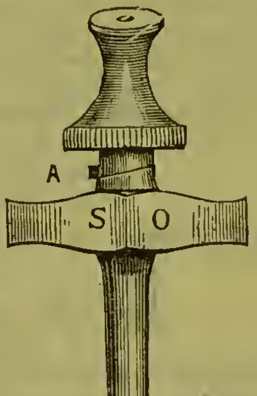
For particulars of the Stereoscopic Company's other novelties, the Magic Fountain Pin, the Captive Damsel, the Headless Goblin, &c., we must refer to the advertisement, in which prices are also given. The company allows a liberal discount to the trade.

THE LYCHNOPHYLAX, OR CANDLE-GUARD.
(PATENTED.)



THE inventor of this valuable device mercifully gives us a choice of titles, to the latter of which we propose to confine ourselves. The "candle-guard," therefore, which Messrs. J. C. & J. Field, of Lambeth, are introducing, and which may also be obtained from Messrs. S. Maw, Son & Thompson, is, as it is laconically described by the inventor, a glass saucer for catching the grease in the right place instead of the wrong, that is, at the top of the candle instead of at the bottom. It adds considerably to the appearance of the candle, pleasantly reflects the light, and above all entirely prevents guttering, an advantage which candle burners will most readily appreciate. The saucer rests on the top of the candle, and, of course, descends with it as the consumption proceeds. In order to keep it in action to the end of the candle it is only necessary to fix the candle in one of the metal save-alls into which the candle can be fixed, and over which the candle-guard will descend. It is shown with the save-all in the engraving. The plain form of these candle-guards will retail at 1s., but they are also supplied in engraved and cut designs.

LYNCH'S "PERFECTION" CHAMPAGNE TAP.



MOST readers are acquainted with the defects of the champagne taps which have been hitherto introduced. The danger of swallowing the spike of the screw, and the inconvenience of having the tube stopped by cork were among these. In Messrs. Lynch's new tap an ingenious plan is adopted to obviate former imperfections. By turning the handle at A towards S the tube is shut; when the cork has been pierced, it is only necessary to turn the top towards O, and this movement opens the tube at the spike, and thus admits the flow of the liquid. Our experiment with the tap answered admirably.

LEGAL & MAGISTERIAL.

A FAMILY ARRANGEMENT.

At the Northampton sessions, Hopkins Jones Davies, 34, druggist, of Northampton, and his brother-in-law, George Smith, 37, druggist, of 112 Burlington Street, Liverpool, and formerly assistant to Dr. Whittle, were brought up charged—the former with stealing certain drugs, the property of the Northampton Infirmary, and the latter with feloniously receiving the same. The evidence showed that Davies, who was a dispenser at the Northampton Infirmary in August last, sent a hamper to the other prisoner, containing chemicals, drugs, &c. Some of the articles were found in Smith's shop, and he admitted having received them from Northampton. The prisoners were found guilty, and sentenced, Davies to four months' and Smith to three months' imprisonment.

ATTEMPT TO POISON A FAMILY.

A young man named John Thomas Stoner is in custody at Leeds on a charge of attempting to poison the members of a family with whom he had been lodging in Holbeck. On Friday, whilst Mr. Robert Taylor and his family were at tea at their residence, 48 Bowling Green Terrace, Holbeck, their attention was drawn to the strange behaviour of the prisoner, who boarded with the household. Suspecting that all was not right the cups of tea, of which they were about to partake, were sufficiently emptied to show the sediment, when a quantity of quicksilver was found mixed with the sugar. Stoner, when accused of attempting to poison the family, did not deny the charge. He was apprehended on Saturday morning and removed to the Town Hall. His mind is supposed to be deranged, and as a precaution against any attempt at self-destruction an officer is stationed in his cell. He has been for some time employed as a clerk at the Hunslet Lane station of the Midland Railway Company.

INFRINGEMENT OF THE PHARMACY ACT.

Mr. George Day, proprietor of the Clerkenwell Tavern, Farringdon Road, was sued at the Bloomsbury County Court for the penalty of 5*l*., incurred by selling some oxalic acid in a shop which he held in the same neighbourhood. Defendant pleaded that he had been summoned to the Clerkenwell Police Court, and Mr. Arnold, the magistrate who presided on the occasion and whose decision might be taken to be as good as that of the Lord Chief Justice of England, decided the case by releasing him on his own recognisances to come up for judgment when called upon. If he had to be brought up for judgment it should surely be before Mr. Arnold. It was not right that he should have criminal and civil proceedings taken against him in the same case.

His Honour said if the Defendant had effected two sales of poisons, and had been convicted on one, it would not release him from liability on the other.

Defendant said both cases were gone into at the Police Court.

His Honour said he could not help that, and he could not strain the law in favour of Defendant, as his offence was committed against the public.

Defendant said that he was not aware that he had committed any offence.

His Honour said Defendant had stated that Mr. Arnold's decision might be taken to be as good as that of the Lord Chief Justice of England, and Mr. Arnold decided that he had committed an offence.

Defendant said he objected to being tried for the same offence twice.

The sale having been proved, Defendant said up to the time the magistrates decided the matter, he was not aware he was doing wrong. He had never sold pills, drugs, or anything else himself, and never went behind a counter; he had a competent assistant. The business came into his hands through a person failing. The prosecution against him was brought about by two of his neighbours, who were chemists in Exmouth Street. They both dealt with Messrs. Herrings, the wholesale chemists, while he had his drugs elsewhere. They complained to Messrs. Herrings, and the latter laid the matter before the Pharmaceutical Society. After the case was decided at the police-court, he gave his assistant notice, and at once ceased to sell poisons and drugs. He thought the case was brought before his Honour because Mr. Arnold refused to fine him, and the solicitors could not get their costs. It was the same case as that before the magistrate, and he argued that it ought not to be tried again.

His Honour said he was of opinion that two distinct offences had been committed, and because one had been dealt with at the police-court, that was no reason why the penalty for the other offence could not be sued for in that court. The Act of Parliament was passed for the benefit of the public, and before it was passed numerous deaths arose from the incautious sales of poisons. The Defendant was an educated man, and ought to have known that he was doing wrong, although he said that he did not. He should give judgment for Plaintiff, with costs.

Defendant asked his Honour to state a case, as he wished to take the matter to the Court of Queen's Bench.

His Honour said if the Defendant thought he had done him a wrong, he would state a case.

Defendant said he believed his Honour had conscientiously decided the case, but he thought the decision was wrong.

His Honour said he would give the Defendant leave to appeal, and would state a case as desired.

In reference to this case Mr. Thomas D'Aubney, one of the only two chemists in Exmouth Street, writes to the *Clerkenwell News* to deny having had any share in "putting the machinery in motion," to which Mr. Day replies, intimating that Mr. D'Aubney was the chemist referred to, but that now he accepts that gentleman's denial.

INFRINGEMENT OF TRADE MARK.

At the Middlesex Sessions, October 14, George Herbert Clarke surrendered to his bail on a charge of having infringed the registered trade mark of Mr. Francis Jonathan Clarke, of Bracebridge Hall, Lincoln, the proprietor of the well-known patent medicine, "Clarke's World-famed Blood Mixture." Mr. M. Williams was counsel for the prosecution, and Mr. Besley for the defendant. On the case being called on Mr. M. Williams said that the defendant, who was in business as a pharmaceutical chemist in Shoreditch, had some months ago been appointed an agent for the sale of "Clarke's World-famed Blood Mixture," and had been as such agent supplied with the prosecutor's show cards, counter bills, and other usual advertisements. While in possession of these, and while acting as agent for the prosecutor, he had sold medicines under a name and in wrappers which he contended amounted to an infringement of the prosecutor's (Mr. Francis Jonathan Clarke's) trade mark. That gentleman, however, had no vindictive feeling in the matter, but was only desirous of protecting his property, and as that object would be fully secured by the defendant apologising and undertaking not to repeat the acts complained of, he should, with the sanction of the learned judge, offer no evidence for the prosecution. Mr. Besley, for the defendant, said that although he might probably, if the case had gone on, have been able to show that the name adopted by the defendant for his medicine, "that of the blood renovator," and the wrappers and labels used by him, did not amount to an infringement of the prosecutor's trade mark, yet, as the defendant had been one of the prosecutor's agents, and as that gentleman had gone to great expense in advertising, and it was only fair that he should have the full benefit of his outlay, the defendant was willing to express his regret at having afforded the prosecutor any reasons for complaint, and to undertake that the conduct complained of should not be repeated. Mr. Serjeant Cox having expressed his concurrence in the course adopted by the learned counsel, a verdict of Not Guilty was formally taken, and the proceedings terminated.

COURT OF EXCHEQUER.—Nov. 10.

AN ADVERTISEMENT DISPUTE.

Before the Lord Chief Baron, *Barons* Cleasby *and* Amphlett.

CROOK *v.* STEEL AND ANOTHER.

This was an action to recover compensation for an alleged breach of contract, and also for money due on an account stated.

The defendants denied the allegations in the declaration, and pleaded *nunquam indebitatus.*

Mr. Palmer was counsel for the plaintiff; Mr. Huddleston, Q.C., appeared for the defendants.

The plaintiff was an advertising agent, doing business under the title of Crook & Co., at No. 2 Montpelier Street, Brompton. The defendants. Messrs. Steel & Marsh, were chemists in Bath. The plaintiff having forwarded a circular canvassing for advertisements, accompanied with a list of about 260 almanacks, directories, &c., published annually, as furnishing good means of advertising, the defendants put themselves in communication with him by letter. The terms upon which the plaintiff undertook the insertion of advertisements in such publications were, for the whole page, 10*s.* 6*d.*; half page, 6*s.*; quarter page, 4*s.* The defendants expressed a wish for the insertion of an advertisement of a certain "Stomach Pill" which, it was stated, was capable of curing indigestion and many other ailments. After some negotiation as to whether the said advertisement should occupy half a page or a quarter, and as to the character of the type for it, it was alleged by the plaintiff that an arrangement was at length come to on the subject, and that the defendants agreed to pay him for such advertisement half in cash and the other half (30*l.*) in goods. On applying to them for a settlement of the account pursuant to those terms, the plaintiff stated that the defendants refused to give him any goods by way of payment. The whole of those negotiations were carried on by means of letters. One of the letters written by the plaintiff to the defendants asked the latter whether they would like "camomile" spelled with an "h" and "indigestion" spelled with an "n" in the advertisement they had sent him for insertion.

The learned Judge here observed that he supposed the camomile was to cure the indigestion.

Mr. Huddleston, Q.C., said that he had an unanswerable defence to the action, and expressed a wish to cross-examine the plaintiff in reference to a certain poem entitled "Sunshine and Shadow."

The learned Judge having inspected the paper purporting to contain the alleged contract, objected to its reception on the ground that it was not stamped.

Mr. Palmer said that his client was prepared to cure the defect by the payment of the penalty.

The plaintiff having taken from his purse the sum of 11*l.*, was about to hand it to the Master of the Court, as the amount of the penalty, when the learned Baron suggested that he ought to take time for consideration and to confer with his counsel.

Mr. Huddleston, out of mercy to the plaintiff, earnestly urged his learned friend to peruse the documents in the case with attention, observing that he would find himself utterly unable to prove his case in respect to the insertion of the advertisement in question in the 200 almanacs and other annuals which, by the terms of his agreement, the plaintiff contracted to do.

After a brief conference between Mr. Palmer, Mr. Crook's solicitor, and the plaintiff himself, the learned counsel said that he had advised his client to the best of his ability, and the plaintiff now thought it better to let the matter stand as it did without submitting his case any further to the Court. He must, therefore, submit to a nonsuit.

The plaintiff was nonsuited accordingly.

An extraordinary scene took place at the Wednesbury parish church on the 22nd ult. A chemist from Birmingham named Smith and a Miss Pritchard attended to enter into the holy bonds of matrimony, when two gentlemen and two females arrived "post" from Birmingham, one of the ladies asserting that she ought to be made "Mrs. Smith," and a painfully sensational affair was anticipated. The clerk endeavoured to assuage the feelings of the disappointed, and the ceremony passed off without any brawling. It is anticipated it will cause some work for a law court.

Correspondence

THE LIVERPOOL CHEMISTS' ASSOCIATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Many will have read with interest the well-written editorial article under the above title in your last month's journal. It merits attention from the fact that, whilst possessing the above attribute, it contains several misplaced facts, and much that is untrue. For example, my name occurs five times, in four of these connected with circumstances each one of which is misstated. This doubtless arises from the communications to you having been verbal ones, from two persons, one of whom possesses the power in a marked degree of adapting his atoms to their environment—Liberal in London, Conservative in Liverpool.

I am no politician, no advocate of party, but simply of progress, and perhaps ought not to have taken up such a matter, but do so with a view of placing the simple facts before your readers; epitomised they are as follow:—

On my unsought election to the presidency last year, I pointed out to the council and members generally the unhealthy condition of the Association, endeavoured to find the cause and apply a suitable remedy.

Desiring, as earnestly as anyone could, the elevation of pharmacy, I could not, however, regard it simply as a profession, science and art, and ignore its trade character. A large number of our members, *ergo* subscribers, are trading chemists and druggists, and year by year they have been withdrawing or threatening to withdraw from the Association, on the ground that it does not meet their requirements and gives them nothing in return for their subscriptions.

Several times had I been asked to lend my aid in organising a new association, and on one occasion with liberal offers as regards pecuniary support; but I preferred, with the aid of a few friends, to attempt the more difficult task—viz., the much-needed reformation of the existing one. One friend seemed quite willing to join me in search of Utopia if I thought the expedition a desirable one—but in attempting a reform of the Liverpool Chemists' Association, never! It can't be done! bringing his knuckles on the table to give emphasis. Words of caution were not wanting from those on whom I relied for help, and who, notwithstanding, acted as true men in the cause we had at heart.

We commenced last autumn with a good accession of members, and an excellent attendance. The citrate of magnesia question directed our attention to an abuse of the Adulteration Act. Much to the credit of our borough analyst, the law has here been judiciously applied; still most pharmacists looked on it as a serious matter that such a law should exist in a form so imperfect, and I felt it my duty to bring the matter before our members. At a full meeting more than three-fourths present expressed their desire that the matter should be taken up, and it was accordingly referred to the council for action.

Desirous that we should not be misunderstood, I repeatedly pointed out that we were not opposed to a judicious Act, justly administered, but to the inconsistencies of the present one, and its oppressive administration. This resulted in a circular being drawn up, inviting the attendance of all in the neighbourhood connected with pharmacy at a meeting "to consider the bearing of the Adulteration Act on our calling;" these were the exact words, not as you have it, to hold "an open demonstration against the Adulteration Act."

A majority of the council ultimately decided not to take action in the matter, and thus struck a fatal blow to any marked success for last session. I did *not* resign, but should have done so had not the persuasive powers of the opposition been exercised in wishing me to continue.

And here I feel that unless I became personal and somewhat severe in my remarks it would be impossible to make it clear why what appeared to be merely a little opposition should call for such decided action on the part of myself and supporters. Those at the scene of action know well there was sufficient cause. Mr. Armstrong (hon. sec.) was at Bristol for the benefit of his health: he will, I am sure, have no objection to finding his name on the list of those who desire reform, but why it should have figured so prominently on this occasion is not quite clear. Dr. Cook was not then on the council, and had nothing to say (if I remember rightly) about the Act. He took his stand as a member of the Association on the ground that a majority of the council had chosen to disregard the wishes of a large majority of members. Mr. Tanner gave us his hearty support, although his name is omitted in your article.

On the decision becoming known, the attendance at the meetings diminished, and the special interest which marked the session up to that time ceased. Several times the question was put to me whether I would continue in office, if re-elected, for another session? I always replied in the negative. At the meeting for electing officers this year I still refused as firmly as was consistent with courtesy to those present; persuasive pressure in a greater or less degree by eight out of the nine who constituted the meeting was brought to bear, and without consenting in any way, I began to wonder whether I was refusing a positive duty. Perhaps my silence just then was considered as equivalent to consent; the motion was put and carried unanimously (but for one exception). Next day (not next week), I sent the following letter to the secretary:—

> J. T. Armstrong, Esq.
>
> DEAR SIR,—Since our meeting yesterday my mind has been much occupied with the Chemists' Association. I feel satisfied that I cannot serve the Association to my satisfaction as president; that to allow myself to be re-elected against my will was an error, to act would be but to perpetuate the same. I beg, therefore, you will tender my thanks to your council for their courtesy, and ask them to elect someone else to the office.
>
> Faithfully yours,
>
> St. James's Road. CHARLES SYMES.

I felt that unless a much larger amount of time were given to the Association than I could arrange for, it would be impossible to repair the mischief done last session; that the gentlemen who in your article and elsewhere assume the very admirable character of peacemakers would still find it as easy to oppose if opportunity occurred; and further, that one of them thirsted for the honour I so lightly regarded.

Under these circumstances, my resignation or rather non-acceptance of office was, I think, fully justifiable.

Your article brings us almost up to date; you have Mr. Hallewell's judicious refusal to accept the vice-presidency, and you quote these remarkable words, "War to the knife," which were used not by us, but by one of the peacemakers (!) at a recent meeting.

The programme for the present session cuts down the ordinary meetings for Papers to one-half the former number, and the majority of Papers promised are from non-members.

That all may contribute ultimately to the prosperity of the Association and the progress of pharmacy is the sincere wish of

Yours faithfully,

CHARLES SYMES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In the October number of your periodical appears an article on "The Liverpool Chemists' Association." So far as the statements therein contained concern myself, I can give an unqualified denial to them. So far as they concern the proceedings of the council of the Association they deserve only silent contempt.

From whomsoever you received the valuable information, or whoever concocted it, I can truly say, that to him "truth is stranger than fiction."

When you, Sir, degrade your periodical by publishing statements which it must be evident to you are breaches of confidence if true, and if not true only likely to deceive, no argument can be needed to prove that pharmacy in having your periodical for one of its organs has indeed fallen on evil times.

I am, Sir, yours obediently,

Liverpool, November 10, 1874. EDMUND A. COOK.

[If Dr. Cook should think proper to favour us with any further communications, he is quite at liberty to dispense with any of the inconveniences of modern courtesy. But unless his future contributions should contain something more original than the information that a statement "not true" is "likely to deceive," they will secure the doom from which this is saved only for the purpose of showing what an interesting addition to the Liverpool Chemists' Association our correspondent must be. —ED. C. & D.]

THE CLIFTON CHEMISTS—A CORRECTION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—In your "Trade Memoranda" of last month there is a notice that Mr. White and Mr. Driver succeed to the business of Messrs. Giles & Son, of Clifton, and the paragraph concludes:—"We are informed that Mr. Schacht is also interested in the new firm."

I beg to state I am in no way interested in the new firm, except as regards my hope to find its members good neighbours and honourable opponents.

I am, sir, your obedient servant,
G. F. Schacht.

7 Regent Street, Clifton, October 16, 1874.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—You have drawn my attention to a paragraph in the current No. of the Chemist and Druggist, which announces the sale of my business at Hampton, and my succession (with Mr. Driver) to that of Messrs. Giles & Son, Clifton.

I beg to assure you that there is not the slightest foundation for your belief "that Mr. Schacht is interested in the new firm," except in so far that he may reasonably be supposed to feel interested in new comers who are his neighbours and opponents in trade.

I am, Sir, your obedient servant,
Clifton, October 19, 1874. James W. White.

THE PHARMACEUTICAL EXAMINATIONS.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

Sir,—Will you do me the favour of publishing the annexed letter in your next issue? I sent it to the P. S., and in the journal of the 24th ult. it was commented upon in the leading article, but the letter was not inserted. I wrote to the Editor last week complaining that I was not satisfied, and wished to have the letter published in its entirety; the only notice taken of that was that a short answer was given in the "Answers to Correspondents," and the insertion of the letter declined. From what I have heard from different quarters, I am convinced that the publication of the letter will be acceptable, and if you will kindly accede to my request I shall esteem it a great favour.

I am, sir, your obedient servant,
J. B. Shillcock.

Bromley, November 4, 1874.

TO THE EDITOR OF "THE PHARMACEUTICAL JOURNAL."

Sir,—I think some notice should be taken of the examinations of the present year and their results in contrast with 1873. By statements that I have obtained I find that in 1873 the number of candidates for the Minor Examination was 745, of which number 410, or about 52 per cent., passed; and in 1874 the number of candidates was 894, of which 278 only, or about 29 per cent., passed. There must be some particular reason for such an extraordinary difference which requires explanation, because the Syllabus of 1874 was the same as that of 1873, and it is very clear that in 1873 either a great number of pupils were allowed to pass who were not competent, or a great number who were examined in 1874 were very unfairly dealt with; and I cannot believe that the standard of ability in the candidates of 1873 was so much higher than in 1874; indeed, I have no hesitation in declaring my conviction that the contrary is the case. I ask why, in 1874, 70 per cent. failed, and in 1873, 48 per cent. only? when at the same time the examinations were declared to be alike in both years.

In bringing this subject forward, from the sentiments I have heard expressed, I believe the great majority of the chemists in the country will indorse my opinions. I complain that the same rule carried out in 1873 has been unfairly exceeded in 1874, and is likely to bring odium on the Society and dissatisfaction to the candidates. In many instances great trouble, anxiety, and expense have been incurred, and if the idea should enter the minds of students that an uniform and unbiassed system is not the standard rule of the examiners, many will be deterred from submitting themselves to the ordeal or leave the business, which, in many instances, has already been done. There ought to be a standard of marks, estimated upon the entire examination, and a young man who has passed four-fifths of the subjects and failed in one only ought not to be plucked upon that and summarily dismissed. I will only observe further that where a student is deficient upon one or two subjects and well up in the others he should be informed of it, and allowed to perfect himself where he was imperfect, and go up again upon the points he had failed in, instead of having to begin again *de novo*.

I am, sir, yours obediently,
J. B. Shillcock,
Pharmaceutical Chemist.

Bromley, Kent, October 20, 1874.

HARVEY'S TOOTHACHE PENCILS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Dear Sir,—Will you kindly allow me through your columns to complain of the injustice and want of courtesy with which I have been treated by your contemporary the *Pharmaceutical Journal*. In the columns of that journal of September 19 appeared a letter signed "M. P. S.," cautioning the trade against the sale of "Toothache Pencils" without a patent medicine stamp, and asserting that chemists having the pencils in stock were liable to a fine. The result of that letter was that I was inundated with communications from chemists all over the kingdom, some enquiring if it was correct that my toothache pencils required a stamp; others, if I would guarantee them against fine; but the majority stating that they had stopped selling them altogether. The sale suddenly ceased, and I thereby suffered a severe monetary loss. Directly after the letter appeared, I wrote to the editor, giving the reasons why I had not stamped the article, and informing the trade that I had excellent authority for not doing so, also that (to put the matter beyond doubt) I had sent it for decision to Somerset House. This letter was suppressed, but in the answers to correspondents I was curtly informed that I had better wait till I had an official decision.

The decision from Somerset House has been given in my favour, but the editor has not acknowledged the injustice nor offered any apology; but, in last week's number, a very short paragraph acknowledges the receipt of a letter from Somerset House to that effect.

I consider that the common English principle of fair play (even had I been in the wrong) gave me a right of reply; but, considering that I have been proved right, I have no hesitation in saying that I have been most unjustly treated.

I remain, dear Sir, yours truly,
J. J. Harvey.

36 Stanhope Street, Euston Road, London.

THE PATENT MEDICINE LICENSE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—The grievance in reference to the above to which I have on former occasions asked your attention and assistance is simply this.

The Act 44 Geo. III., cap. 98 orders for the City of London and the *then* existing limits of the two-penny post—2*l*. per annum. Other cities and boroughs 10*s*.; small towns and villages, 5*s*. per annum, for the privilege of vending patent medicines. The limits of the two-penny post at that time were only three or four miles from Charing Cross; gradually they became enlarged, and, at the time of its being set aside by the Penny Postage Act, the privileges of the two-penny post had become extended to about fifteen miles from the General Post Office. The officers of Inland Revenue thus became entitled to increase the charge of 5*s*. to 2*l*. in the villages of the large and thinly populated area outside the boundary of the metropolis, which is now four miles from Charing Cross. The just and legal charge outside this line should be 5*s*. per annum. Representation of the existing anomaly has been made to the Government, and attention has been promised by the Chancellor of the Exchequer. If those of your readers who are aggrieved under the present surcharge will communicate with Mr. Barker, Pharmaceutical Chemist, Kingston-on-Thames, or myself, united simultaneous action will doubtless be successful in obtaining an equitable adjustment of this impost.

Nothing will be done unless the chemists around London who suffer by the unjust impost, send in their names in support of the movement.

In Manchester, Birmingham, and Bristol, the charge is 10*s*. per annum, while at Hampton, Teddington, Barnes, and even smaller villages around, at this distance from London, 2*l*. is paid for the medicine license. Yet a little farther on, say Molesey, Esher, Walton, &c., the charge is 5*s*. There is no objection to these rates, provided only that the 2*l*. charge shall be limited to the four mile radius, comprising London proper.

I remain, Sir, your old subscriber,
New Hampton. T. Mann.

[*The letters from "W. R." and "A Country Chemist" will appear next month. We are unusually pressed for space in this issue.*]

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of the CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of the CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Halse's 10-guinea galvanic apparatus, complete in mahogany case. Cash offers. 16/244.

"Pharmaceutical Journals," posted day after arrival. What offers? R. Carson, Lindley, Huddersfield.

Muspratt's "Chemistry," for Cooley's "Cyclopædia of Receipts," 1872, or offers. 14/244.

Shop bottles, very cheap; or anything in exchange. 83 Rye Lane, S.E.

"Pharmaceutical Journal," January 1853 to May 1869. Clean. Any reasonable offer. Auderson, 113 Holborn.

Petroleum, cask of finest American, 1*s.* 3*d.* gallon, carriage free. Jones, Chemist, Monmouth.

Iron printing press, with roller and type, cheap. T. A. Hirst, 2 Canning Street, Burnley.

30 lbs. Ol. Lavand. Mitcham. Four years old. Warranted. Harrod, Chemist, Oldham.

"Pharmaceutical Journal," posted Tuesdays, for 10*s.* a year prepaid. G. Brown, Sandown, Isle of Wight.

"Pharmaceutical Journal," posted on Monday. Offers wanted? C. Jenner, Bury St. Edmunds.

A number of Leemings' Essence: sample bottle, 15 stamps. Fortune, Anstruther.

Southall's Cabinet, with notes on envelopes. Cost 30*s.* Price 15*s.* J. Somerville, 7 St. Thomas' Terrace, London, S.E.

Good second-hand desk, with glass case in front, cheap. S. Prytherch, Bodedeyrn, Holyhead.

A 4-grain pill machine to cut 18, mahogany, brass mounted, price 8*s.* A 3-light lustre chandelier, 2*l.* 10*s.*, cost 6*l.* 6*s.* Thomas, Chemist, Bath.

Squire's "Companion." 2nd edition, 1866. Cost 10*s.* Offered at 5*s.* Gray's "Supplement." Last edition, by Redwood. Cost 22*s.* Offered at 11*s.* 243/32.

Five pounds best Smyrna opium, at 21*s.*; 1 lb. Argent. Nit. fused; and ½ lb. ditto, re-crystallised, at 3*s.* oz.; 3 ozs. Otto de Rose Virgin., at 18*s.* 26/243.

Dispensary screen, counter scales, and druggist's sundries. A great bargain. Address, Y. X., Post Office, Wolverhampton.

"Pharmaceutical Journal," posted day of arrival, commencing January, 1875. What offers? Statim, 4 Harbour Street, Folkestone.

Complete soda-water plant by one of the best makers; machine with pressure indicator, bottling apparatus, &c., recipes and directions for use. 14/243.

Two electric bells, suitable for shops, laboratory, &c., constant battery; push, 100 feet of wire; complete with directions, new, 16*s.* each, cost 21*s.* Jones, Chemist, Monmouth.

One pair Dr. Ball's American eye cups (lignum vitæ), with full directions, post free, 19*s.* 6*d.*, equal to new, cost 26*s.* G. R., 125 Hyde Road, Manchester.

Pill machine, to roll 36 3-grain. Nearly new. Offers wanted. Also "Pharmaceutical Journals" for sale, either singly or consecutively. F. Hanson, 8 Market Place, Retford, Notts.

A 40 and a 60 brass wire sieve, 12 inches in diameter, with top and bottom drums to fit either. Very little used. Cost 16*s.* 6*d.* Will take 10*s.* Walter Stead, Westgate, Heckmondwike.

Bentham's "British Flora," 1,295 original drawings, 2 vols., latest edition (1865), perfectly new and uncut. Price, 31*s.* 6*d.* (published at 3*l.* 10*s.*). D., 161 Seven Sisters' Road, London, N.

Royle's "Materia Medica," new, 7*s.* 6*d.*; Fowne's "Manual," new, 8*s.* 6*d.*; Heath's "Surgery," new, 4*s.* 6*d.*; Lindley's "School Botany," 3*s.*; Bowman's "Chemistry," 3*s.* 6*d.*; 2 volumes "Lancet," 1841, 5*s.*; Pereira's "Materia Medica," new, 18*s.* 31/244.

Iron mortar and pestle, half-gallon tincture press, 30 glass jars, various sizes, Avery's scales, on stand with drawer, ornamental pillar gas stove, 168 drawers in four nests. Particulars and prices on application. Open to exchange. Stead, Chemist, Lees, near Manchester.

Taylor's veterinary medicines—35 cleansing drinks; 14 general cow drinks; three 2*s.* 6*d.* condition powders; two 1*s.* 9*d.* and one 3*s.* condition balls; six 2*s.* and five 1*s.* foot-rot dressing. All in saleable condition, but labels faded. The lot for 30*s.* To retail at 3*l.* 11*s.* 3*d.* Davies, 7 High Town, Hay.

Five 4-gallon pear-shaped carboys, with mahogany stands, 35*s.*; separately, 8*s.* G., 153 Liverpool Road, N.

Holloway's pills and ointment, 9*s.*, 23*s.*, and 35*s.*; Steedman's, 9*s.* Cash with order. 3 dozen, assorted, free to London house. 5-grain pill machine, rollers, marble slab, 10*s.*; 2 lbs. dolichos for 1*l.*; Wright's sapo, 3, 5 doz. Padwick, Red Hill.

4 4*s.* 6*d.* Wray's balsamic pills; 4 2*s.* 9*d.* De Roos' renal pills; 1 2*s.* 9*d.* Coburn's balsam; 1 1*s.* 1½*d.* Roper's plaster; 2 9½*d.* Roper's plaster; 4 1*s.* Cuff's foot-rot powder (soiled); 1 3*s.* 6*d.* Oldridge's balm; 1 2*s.* 9*d.* Gowland's lotion, wrapper torn; 3 1*s.* 1½*d.* M'Kenzie's cough elixir; 2 1*s.* Sir W. Burnet's disinfecting fluid; 2 3*s.* "Mamma" feeders. Offers for whole, or part, or what in exchange, to Cleghorn, Chemist, Cupar Fife, N.B.

Two iron, 6 wedgwood, 1 marble, 3 glass mortars and pestles; 24 black glass stock bottles, with japan and gilt caps, mahogany window enclosure and side counter, mahogany desk, 2 nests shop drawers, 2 pill machines, one 10-gallon oil cistern, gold labelled paraffin, 24 blue syrup bottles, twenty 4-oz., 12 patent oil bottles, with glass caps. All the above open to fair offers. For other goods, see advertisement in Miscellaneous column. Lloyd Rayner, 309 New North Road, Islington, London.

Pink and Webster's "Analytical Chemistry," 1874; Elderhorst's "Blowpipe Analysis," 1861; Griffin's "Chemical Testing of Wines and Spirits," 12*s.* 6*d.* the three; Brande's "Chemistry," 3 vols., 1821, 6*s.*; Paris' "Pharmacologia," 2 vols., 1829, 6*s.*; Muspratt's "Chemistry," 2 thick vols., 1860, 45*s.*; Pilcher's "Structure and Diseases of the Ear," coloured plates, 6*s.* (cost 10*s.* 6*d.*); Pemberton on "Cancer," new, 12*s.* 6*d.* (published at 42*s.*); Cooley's "Practical Receipts," second edition, 12*s.*; Gray's "Supplement," 1847, 14*s.* (published at 28*s.*); Bateman's "Magnacopia," 4*s.*; Craigie's "Pathological Anatomy," 4*s.* 6*d.*; Fownes' "Chemistry," ninth edition, 6*s.* 6*d.*;, carriage paid to London. Chemist, Church Street, Hadleigh, Suffolk.

Two sets of books for the Preliminary, 13*s.* and 8*s.* 6*d.*; "System for Simple Analysis," 2*s.* 6*d.*; Lescher's "Botanical Diagrams," 2*s.* 6*d.*; dried specimens, 3*s.* 6*d.*; illegible prescriptions, 3*d.* each; botanists' pocket lens, 5*s.* 6*d.*; Southall's "Organic Mat. Med.," 3*s.* 6*d.*; "Selecta Prescripti," 2*s.* 6*d.*; Royles' "Manual," 5*s.*; Bowman's "Chemistry," 2*s.* 6*d.*; Lescher's "Elements," 4*s.* 6*d.*; Squire's "Companion," 3*s.* 6*d.*; Lindley's "School Botany," 1*s.* 4*d.*; Milton's "Spermatorrhœa," 3*s.* 6*d.*; 6 Smee's batteries, 8*s.* 6*d.*; two valuable specific formulæ, 3*s.* Galen, 47 East Street, Baker Street, W.

WANTED.

Tanner's "Practical Midwifery and Obstetrics." 24/244.

Potassæ sulphas in quantity. C. F. Hoare, Chemist, Derby.

4 show jars, 24 to 27 inches. Sharp, chemist, Sunderland.

Large mortar, stone or marble, about 18 inches diameter of aperture. Kay Brothers, Stockport.

Chemist's lamp. State price and condition. How, Chemist, Oxford.

A large Hahnemann's bust, tinned iron oil cisterns with brass taps, to hold 36 or 40 gallons. Thomas, Chemist, Bath.

4 6-gal. globes. Mr. J. Swyer, 131 Brick Lane, Bethnal Green, London.

A Southall's cabinet, in good condition. John Wearing, St. Just, Cornwall.

A large cast-iron mortar and pestle. State size, condition, and price. Also an ice chest. Whitfield, Scarbro'.

A good soda-water machine, capable of bottling 300 doz. per day. Harvey, chemist, Oldham.

2 8-gal. pear-shaped carboys, with stands; also street lamps with or without lenses—height, 3 feet 9 in. 28/243.

Cistern for paraffin oil, with patent measuring tap. Flat circular globes and tall narrow cylindrical show bottles. 6/242.

Bottles, &c., suitable for commencing; globes, specie jars, and soda-water machine. Alpha, 34 High Street, Putney, London.

Shop lamp, with pillar, and one with bent arm. Globes preferred; also two swan-necked carboys. F. Williams, 55 King Henry's Walk, N.

A nest of label drawers; size, 40 in. high and 18 in. broad. Apply, by letter only, stating price, to A. D., 154 Upper Whitecross Street, E.C.

To loan or purchase Ray's "Synopsis," ed. 2; "Botanist's Guide;" "New Botanist's Guide," vol. i.; "Phytologist." State Price, G. C. Druce, Northampton.

TRADE REPORT.

TRADE still holds on its even course, and there is now little hope of real briskness for chemical manufacturers this side of the Christmas holidays. It is hardly likely that prices for British staples will remain so low next year as they stand now, as the stocks of large consumers must be pretty well used out by this, and there is fair prospect that the demand will strengthen as time goes on.

Alkalies have been rather more plentiful: some of the works which had lessened production for want of fuel are now reported fully employed. The better supply will, however, not prevent the generally anticipated rise, as the prices now ruling barely cover the cost of manufacture, and makers will before long try to widen the present margin. The demand for bleaching powder has been somewhat weaker, and a slight concession has been obtained on the figure it realised last month. Nitrate of soda remains unaltered; moderate quantities have changed hands at the previous prices. Sulphate of ammonia has found ready buyers at a small advance. Sulphate of copper has been quoted 5*s.* to 10*s.* higher. Caustic soda has been in fair demand at the previous price. Brimstone is noted 5*s.* above present list for delivery over the first half of next year. Licata and Catania holders have withdrawn their stocks from the market, being unable to obtain at the moment the prices they expect to realise at no distant date.

Quicksilver still soars. It has reached 25*l.* for bottles, and is not to be had now from first hands even at that figure. It is impossible to predict anything with regard to this exceptional commodity.

Iodine, as we noted last month, has been considerably affected by the new competition from Chili. The Chilian iodine is obtained, not from kelp, as is the Irish and Scotch, but from the mother liquor of the nitrate of soda manufacture. The supply is said to be practically unlimited, and the quality of the new iodine is reported to be very high, though of course not quite equal in percentage to old Scotch. The consignees refuse to listen to any overtures of combination, and prefer to simply offer at auction what arrives. Some think a little lower price is probable, but as considerable quantities of Scotch manufacture have changed hands within the past fortnight, apparently bought with speculative ideas, the market indications would seem to point rather towards an advance than a fall.

Citric acid is dull, and, in consequence of the good reports in respect to juice, prices for forward delivery are easier.

Drug sales have been fairly active. The most notable features of those recently held have been a considerable decline in vanilla. Bees' wax dull of sale and mostly withdrawn. Barbadoes aloes, annatto, musk and sarsaparilla have sold at steady prices; ipecacuanha and jalap at easier rates, while honey (Jamaica), citronelle oil and lemongrass oil, China rhubarb and Calcutta tamarinds have brought very full to advanced prices.

Some excellent samples of Ceylon cinchona were bought in at prices varying from 5*s.* 6*d.* downwards.

Camphor (China) is nominally quoted at 80*s.*, but buyers are not obtained at that figure, and 77*s.* 6*d.*, and even 75*s.*, have been accepted privately.

The upward movement of shellac has continued, latest sales being, DC fine orange, 297*s.* 6*d.* to 300*s.*; fine I in diamond, 2nd orange, 285*s.* to 290*s.*; good, 280*s.* Native good to fine orange, 275*s.* to 280*s.*; block ditto, 250*s.*; resinous liver, 210*s.* to 240*s.*; blood, 2nd, 250*s.* to 252*s.* 6*d.*; Garnet AC, free, 225*s.*; block, 182*s.* to 185*s.* Sales since our last on spot and for arrival amount to nearly 2,000 cases.

Turmeric has marked a heavy advance, about 500 bags Bengal having sold at 22*s.* 6*d.* to 22*s.* 9*d.*; subsequently, about 2,000 bags changed hands at 23*s.* 6*d.*, rising to 26*s.* 6*d.*; spot and arrival market still looking up. Afterwards further business has been done up to 28*s.* 6*d.* to 29*s.*

Musk has been rather abundantly brought forward, and, with the exception of fine, prices have ruled in buyers' favour.

Oils.—Linseed has continued depressed, and has declined to 26*l.* 5*s.* on the spot. December is quoted 26*l.* 5*s.*, and January-April, 26*l.* to 26*l.* 5*s.* Rape is also again lower, English brown on the spot having been sold down to 28*l.* to 28*l.* 2*s.* 6*d.*, and December to 28*l.* 5*s.*; January-April quoted 29*l.* 5*s.*; English refined on the spot, 30*l.* to 30*l.* 5*s.*; and foreign, 31*l.* 10*s.* Cotton oil has continued to favour buyers. Small sales of Mogadore at 40*l.* 5*s.*, and some good Spanish at 42*l.* 10*s.*, are the only transactions reported in Olive. Ceylon cocoanut has been steady, but in less request. As regards Palm, fine Lagos has been obtainable at 36*l.* 10*s.*, but not so much business has taken place. About 20 tuns of crude Sperm have been sold at 105*l.* Whale, the supply of which is very limited, continues firm at 28*l.* to 36*l.*, according to quality. Seal is steady at 28*l.* to 35*l.* 10*s.* Cod, 38*l.* 10*s.* to 39*l.*

Petroleum Oil.—Although the market is steadier than it was, no decided improvement can as yet be reported. Sales of SW on the spot have been made at 8*d.* with short, and at 8¼*d.* with full prompt, on the spot closing at 8¼*d.* to 8⅜*d.*, while for PW 8½*d.* is required. Some quantity was sold for December at 8½*d.*, December-January at 8⅜*d.*, and January-April at 8¾*d.* to 9*d.* The only business mentioned in cargoes is 900 barrels, at present afloat, at 8⅝*d.*

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.	1874.					1873.				
	s.	*d.*		*s.*	*d.*	*s.*	*d.*		*s.*	*d.*
ACIDS—										
Acetic per lb.	0	4	to	0	4½	0	4	to	0	0
Citric ,,	4	2	..	4	2½	4	6	..	0	0
Hydrochlor per cwt.	5	0	..	7	0	4	0	..	7	0
Nitric per lb.	0	5	..	0	5½	0	5	..	0	5½
Oxalic ,,	0	7	..	0	0	0	7½	..	0	7¾
Sulphuric ,,	0	0¾	..	0	1	0	0¾	..	0	1
Tartaric crystal.. ,,	1	7¼	..	0	0	1	7	..	0	0
powdered ,,	1	7¼	..	0	0	1	7	..	0	0
ANTIMONY ore per ton	200	0	..	240	0	240	0	..	280	0
crude .. per cwt.	0	0	..	0	0	0	0	..	0	0
regulus .. ,,	0	0	..	0	0	0	0	..	0	0
star ,,	46	0	..	47	0	57	0	..	58	0
ARSENIC, lump ,,	20	6	..	0	0	20	0	..	20	6
powder ,,	10	0	..	10	3	10	3	..	0	0
BRIMSTONE, rough per ton	145	0	..	150	0	127	6	..	145	0
roll .. per cwt.	10	0	..	10	6	10	0	..	10	6
flour ,,	11	6	..	12	0	12	0	..	12	6
IODINE, dry per oz.	0	8	..	0	0	1	3	..	0	0
IVORY BLACK, dry .. per cwt.	8	6	..	0	0	8	6	..	0	0
MAGNESIA, calcined..per lb.	1	6	..	0	0	1	6	..	0	0
MERCURY per bottle	500	0	..	520	0	400	0	..	0	0
MINIUM, red per cwt.	24	6	..	0	0	24	6	..	25	6
orange .. ,,	36	0	..	0	0	35	6	..	0	0
PRECIPITATE, red . per lb.	7	3	..	0	0	5	7	..	0	0
white ,,	6	2	..	0	0	5	6	..	0	0
PRUSSIAN BLUE .. ,,	0	0	..	0	0	0	0	..	0	0
SALTS—										
Alum per ton	165	0	..	175	0	170	0	..	180	0
powder ,,	185	0	..	190	0	190	0	..	0	0
Ammonia :										
Carbonate per lb.	0	7	..	0	7¼	0	7½	..	0	7¾
Hydrochlorate, crude, white per ton	640	0	..	0	0	650	0	..	0	0
British (*see* Sal Am.)										
Sulphate per ton	370	0	..	380	0	360	0	..	370	0
Argol, Cape per cwt.	90	0	..	98	0	87	0	..	96	6
Red ,,	76	0	..	86	0	75	0	..	86	0
Oporto, red . ,,	32	0	..	33	0	32	0	..	32	6
Sicily ,,	53	0	..	58	0	60	0	..	65	0
Ashes (*see* Potash and Soda)										
Bleaching powd...per cwt.	10	3	..	10	6	11	0	..	0	0
Borax, crude ,,	40	0	..	66	0	50	0	..	90	0
British refnd. ,,	68	0	..	0	0	92	6	..	95	0
Calomel per lb.	6	9	..	0	0	5	2	..	0	0
Copper :										
Sulphate per cwt.	27	0	..	28	0	31	6	..	33	0
Copperas, green..per ton	65	0	..	70	0	60	0	..	62	6
Corrosive Sublimate p. lb.	5	11	..	0	0	4	5	..	0	0
Cr. Tartar, French, p. cwt.	118	0	..	0	0	111	0	..	112	0
brown ,,	95	0	..	105	0	95	0	..	100	0
Epsom Salts per cwt.	5	9	..	6	6	5	9	..	6	3
Glauber Salts ,,	6	6	..	7	0	4	6	..	5	6
Lime :										
Acetate, white, per cwt.	14	0	..	21	0	14	6	..	21	0
Magnesia : Carbonate ,,	42	6	..	45	0	42	6	..	45	0
Potash :										
Bichromate per lb.	0	6½	..	0	0	0	8½	..	0	0
Carbonate :										
Potashes, Canada, 1st sort per cwt.	34	0	..	34	6	35	9	..	36	0
Pearlashes, Canada, 1st sort per cwt.	44	6	..	45	0	47	6	..	0	0
Chlorate per lb.	0	11	..	0	0	1	3	..	0	0
Prussiate ,,	1	2	..	0	0	1	3	..	0	0
red ,,	2	10	..	2	11	2	10	..	2	11
Tartrate (*see* Argol and Cream of Tartar)										
Potassium :										
Chloride per cwt.	7	0	..	0	0	8	0	..	0	0
Iodide per lb.	10	0	..	0	0	19	0	..	0	0
Quinine :										
Sulphate, British, in bottles per oz.	7	4	..	0	0	9	3	..	9	6
Sulphate, French ,,	7	4	..	0	0	9	6	..	0	0
Sal Acetos per lb.	0	10	..	0	10½	0	11	..	0	0
Sal Ammoniac, Brit. cwt.	44	0	..	45	0	44	0	..	45	0
Saltpetre :										
Bengal, 6 per cent. or under per cwt.	21	6	..	22	0	25	6	..	26	3
Bengal, over 6 per cent. per cwt.	19	6	..	21	3	23	6	..	25	3
British, refined ,,	25	6	..	26	0	28	9	..	29	9
Soda: Bicarbonate, p. cwt.	15	6	..	0	0	18	0	..	0	0
Carbonate :										
Soda Ash ..per deg.	0	2½	..	0	0	0	2½	..	0	0
Soda Crystals per ton	100	0	..	102	6	125	0	..	0	0
Hyposulphite, per cwt.	0	0	..	0	0	15	6	..	16	0
Nitrate per cwt.	11	3	..	11	9	15	0	..	15	3
SUGAR OF LEAD, White cwt.	45	0	..	46	0	47	0	..	48	0
SUGAR OF LEAD, Brown, cwt.	38	6	..	39	0	33	0	..	34	0
SULPHUR (*see* Brimstone)										
VERDIGRIS per lb.	1	1	to	1	5	1	1½	to	1	6
VERMILION, English ,,	6	2	..	0	0	4	6	..	4	8
China ,,	5	6	..	5	7	4	8	..	4	4

DRUGS.

	s.	*d.*		*s.*	*d.*	*s.*	*d.*		*s.*	*d.*
ALOES, Hepatic per cwt.	60	0	..	180	0	80	0	..	200	0
Socotrine .. ,,	102	6	..	240	0	110	0	..	320	0
Cape, good.. ,,	36	0	..	40	0	30	0	..	40	0
Inferior ,,	30	0	..	35	0	19	0	..	29	0
Barbadoes .. ,,	40	0	..	187	6	80	0	..	200	0
AMBERGRIS, grey oz.	50	0	..	60	0	35	0	..	42	6
BALSAM—										
Canada per lb.	1	10	..	2	0	2	6	..	0	0
Capivi ,,	2	7½	..	2	8	2	11	..	0	0
Peru ,,	7	0	..	7	8	8	6	..	0	0
Tolu ,,	3	10	..	4	2	1	9	..	1	11
BARKS—										
Canella alba per cwt.	16	0	..	27	0	15	0	..	28	0
Cascarilla ,,	19	0	..	25	0	25	0	..	30	0
Peru, crown & grey per lb.	0	9	..	2	6	0	11	..	2	8
Calisaya, flat ,,	2	2	..	5	0	3	0	..	3	6
,, quill ,,	2	8	..	5	0	3	3	..	4	3
Carthagena ,,	0	6	..	1	1	0	10	..	2	0
E. I. ,,	0	6	..	6	6	0	4	..	4	6
Pitayo ,,	0	4	..	2	0	0	6	..	2	2
Red ,,	1	3	..	3	10	1	10	..	6	0
Buchu Leaves ,,	0	2	..	1	0	0	1	..	0	9
CAMPHOR, China ..per cwt.	80	0	..	0	0	75	0	..	0	0
Japan .. ,,	80	0	..	0	0	82	0	..	0	0
Refin. Eng. per lb.	1	2	..	0	0	1	2	..	0	0
CANTHARIDES ,,	3	0	..	5	0	7	0	..	0	0
CHAMOMILE FLOWERS p. cwt.	50	0	..	84	0	45	0	..	75	0
CASTOREUM per lb.	4	0	..	20	0	6	0	..	20	0
DRAGON'S BLOOD, lp. p. cwt.	95	0	..	220	0	100	0	..	240	0
FRUITS AND SEEDS (*see also* Seeds *and* Spices).										
Anise, China Star per cwt.	115	0	..	125	0	140	0	..	150	0
Spanish, &c. ,,	12	0	..	27	0	35	0	..	42	0
Beans, Tonquin per lb.	3	0	..	3	4	1	9	..	2	6
Cardamoms, Malabar good ,,	4	11	..	5	6	4	6	..	6	3
inferior ,,	2	0	..	4	10	3	6	..	4	5
Madras ,,	2	9	..	3	10	3	6	..	4	6
Ceylon ,,	4	6	..	4	9	4	3	..	4	6
Cassia Fistula per cwt.	14	0	..	0	0	10	0	..	20	0
Castor Seeds ,,	5	0	..	9	0	5	0	..	10	0
Cocculus Indicus ,,	14	6	..	17	0	13	0	..	27	0
Colocynth, apple ..per lb.	0	4	..	0	10	0	4	..	0	9
Croton Seeds per cwt.	42	0	..	44	0	45	0	..	54	0
Cubebs ,,	22	0	..	25	0	22	0	..	26	0
Cummin ,,	16	0	..	20	0	18	0	..	26	0
Dividivi ,,	11	0	..	15	0	11	0	..	15	0
Fenugreek ,,	8	0	..	16	0	12	0	..	20	0
Guinea Grains .. ,,	25	0	..	27	0	25	0	..	28	0
Juniper Berries ,,	9	0	..	10	6	9	0	..	10	6
Nux Vomica.. .. ,,	7	0	..	13	0	8	0	..	12	0
Tamarinds, East India ,,	7	0	..	16	0	5	0	..	18	0
West India, new ,,	10	0	..	18	0	16	0	..	32	0
Vanilla, large per lb.	80	0	..	95	0	73	0	..	83	0
inferior ,,	54	0	..	78	0	30	0	..	70	0
Wormseed per cwt.	0	0	..	0	0	0	0	..	0	0
GINGER, Preserved, per lb.	0	6½	..	0	10	0	6	..	0	7
HONEY Chili per cwt.	35	0	..	46	0	33	0	..	42	0
Jamaica ,,	38	0	..	52	6	28	0	..	44	0
Australian ,,	38	0	..	48	0	25	0	..	40	0
IPECACUANHA per lb.	4	0	..	4	7	3	0	..	3	6
ISINGLASS, Brazil.. ,,	2	10	..	5	7	3	3	..	5	4
Tongue sort ,,	3	0	..	5	8	4	0	..	5	6
East India ,,	1	5	..	4	5	2	6	..	4	8
West India ,,	5	0	..	5	6	4	10	..	5	4
Russ. long staple	8	6	..	13	0	8	0	..	12	6
,, inferior	4	0	..	8	0	3	6	..	7	6
,, Simovia	3	3	..	5	0	2	6	..	4	6
JALAP, good ,,	0	9	..	0	10	1	4	..	1	5
infer. & stems ,,	0	8	..	0	8¾	0	10	..	1	2
LEMON JUICE per degree	0	2¾	..	0	2¾	0	2¾	..	0	0
LIME JUICE per gall.	1	6	..	2	5	1	10	..	2	5
LIQUORICE, Spanish per cwt.	40	0	..	70	0	35	0	..	70	0
Liquorice Root ,,	11	0	..	16	0	10	6	..	15	0
MANNA, flaky per lb.	2	6	..	3	0	2	6	..	3	3
small ,,	1	2	..	1	5	1	4	..	1	9
MUSK, Pod per oz.	20	0	..	45	0	20	0	..	88	0
Grain ,,	42	6	..	57	0	50	0	..	57	0
OILS (*see also separate list*)										
Almond, expressed per lb.	0	11	..	0	0	0	11	..	1	0
Castor, 1st pale ,,	0	4¾	..	0	5	0	5¼	..	0	0
second ,,	0	4¾	..	0	4⅞	0	5	..	0	5¼
infer. & dark ,,	0	4	..	0	4¼	0	4¾	..	0	4⅝
Bombay (in casks)	0	4¾	..	0	0	0	4¾	..	0	0
Cod Liver per gall.	3	8	..	6	3	3	6	..	6	0
Croton per oz.	0	3	..	0	4	0	3	..	0	4
Essential Oils :										
Almond per lb.	25	0	..	0	0	30	0	..	0	0
Anise-seed ,,	9	0	..	0	0	10	9	..	0	0
Bay per cwt.	0	0	..	0	0	65	0	..	70	0
Bergamot per lb.	10	0	..	25	0	15	0	..	18	0
Cajeput, (in bond) per oz.	2	3	..	2	5	2	4	..	2	5
Caraway per lb.	5	3	..	6	0	5	6	..	6	3
Cassia ,,	4	9	..	0	0	5	9	..	6	0
Cinnamon per oz.	0	8	..	7	9	1	0	..	5	0
Cinnamon-leaf .. ,,	0	2½	..	0	3	0	2	..	0	3
Citronelle ,,	0	1¾	..	0	0	0	1¾	..	0	2
Clove per lb.	9	6	..	0	0	5	6	..	5	9
Juniper ,,	1	10	..	2	0	1	8	..	2	4
Lavender per lb.	1	10	..	5	0	1	10	..	5	6
Lemon ,,	7	0	..	10	0	14	0	..	15	0

	1874.		1873.	
Essential Oils, *continued*:—	s. d.	s. d.	s. d.	s. d.
Lemongrass ....per oz.	0 3⅜ ..	0 3½	0 3¼ ..	0 0
Neroli .... „	0 4 ..	3 0	0 5 ..	0 6
Nutmeg .... „	0 7¾ ..	0 8	0 8 ..	0 8½
Orange..........per lb.	8 0 ..	10 0	8 0 ..	11 0
Otto of Roses....per oz.	15 0 ..	22 0	13 0 ..	23 0
Patchouli ...... „	2 9 ..	4 0	3 9 ..	4 0
Peppermint:				
American ....per lb.	20 6 ..	21 0	17 0 ..	18 0
English ...... „	29 9 ..	32 0	27 0 ..	34 0
Rosemary ...... „	1 4 ..	1 10	1 4 ..	1 10
Sassafras ...... „	2 0 ..	3 0	2 3 ..	3 8
Spearmint ...... „	6 0 ..	18 0	6 0 ..	19 0
Thyme.......... „	1 9 ..	2 0	1 10 ..	0 0
Mace, expressed ..per oz.	0 3 ..	0 3½	0 2 ..	0 3
OPIUM, Turkey ......per lb.	35 0 ..	37 0	24 0 ..	27 0
inferior ...... „	14 0 ..	29 0	12 0 ..	20 0
QUASSIA (bitter wood) per ton	0 0 ..	0 0	70 0 ..	90 0
RHUBARB, China, good and fine ....per lb.	2 1 ..	5 9	2 7 ..	5 3
Good, mid. to ord. „	0 3 ..	1 6	0 7 ..	2 5
Dutch trimmed „	0 0 ..	0 0	8 0 ..	10 0
Russian .... „	0 0 ..	0 0	0 0 ..	0 0
ROOTS—Calumba..per cwt.	10 0 ..	18 0	10 0 ..	25 0
China .... „	18 0 ..	20 0	22 0 ..	23 0
Galangal.......... „	22 0 ..	25 0	18 0 ..	26 0
Gentian .... „	17 0 ..	19 0	18 0 ..	19 0
Hellebore .... „	30 0 ..	33 0	30 0 ..	33 0
Orris .... „	30 0 ..	70 0	36 0 ..	80 0
Pellitory.......... „	38 0 ..	39 0	38 0 ..	39 0
Pink ....per lb.	1 0 ..	1 3	1 0 ..	1 3
Rhatany.......... „	0 4 ..	1 10	0 6 ..	1 6
Seneka............ „	3 6 ..	3 10	4 6 ..	5 0
Snake .... „	1 0 ..	1 9	1 8 ..	1 9
SAFFRON, Spanish .. „	22 0 ..	26 0	20 0 ..	25 0
SALEP ....per cwt.	170 0 ..	200 0	170 0 ..	180 0
SARSAPARILLA, Lima per lb.	0 6 ..	0 9	0 6 ..	0 7
Para.............. „	1 0 ..	1 3	1 0 ..	1 3
Honduras .... „	1 4 ..	1 9	1 1 ..	1 7
Jamaica .... „	1 9 ..	2 6	1 6 ..	2 0
SASSAFRAS ....per cwt.	13 0 ..	15 0	16 0 ..	17 0
SCAMMONY, Virgin ..per lb.	25 0 ..	35 0	25 0 ..	30 0
second & ordinary „	8 0 ..	24 0	9 0 ..	24 6
SENNA, Bombay .... „	0 1 ..	0 5	0 1 ..	0 5
Tinnivelly .... „	0 2 ..	0 9	0 2¾ ..	1 2
Alexandria........ „	0 3¼ ..	1 5	0 4 ..	1 10
SPERMACETI, refined „	1 2 ..	1 3	1 6 ..	0 0
American .... „	1 0 ..	1 1	1 2 ..	1 3
SQUILLS .... „	0 1¾ ..	0 3¾	0 1 ..	0 3

GUMS.

	1874.		1873.	
	£ s.	£ s.	£ s.	£ s.
AMMONIACI drop .. per cwt.	4 15 ..	6 5	4 0 ..	6 10
lump.. „	3 10 ..	4 10	2 10 ..	4 0
ANIMI, fine washed „	12 0 ..	13 0	11 0 ..	13 10
bold scraped „	10 0 ..	11 15	9 0 ..	11 0
sorts ...... „	5 15 ..	9 10	5 0 ..	10 0
dark ...... „	5 0 ..	5 5	4 0 ..	4 15
ARABIC, E.I., fine pale picked .. „	2 18 ..	3 10	3 5 ..	3 15
srts.,md.tofin. „	1 16 ..	2 16	2 10 ..	3 0
garblings .. „	0 19 ..	1 10	1 0 ..	2 5
TURKEY,pick.gd.to fin. „	7 0 ..	11 0	7 10 ..	11 10
second & inf. „	3 0 ..	6 15	4 0 ..	7 0
in sorts .. „	1 13 ..	2 15	2 10 ..	3 10
Gedda .... „	1 0 ..	1 10	1 1 ..	1 15
BARBARY, white .. „	1 5 ..	2 2	2 10 ..	2 17
brown .. „	1 6 ..	1 12	1 6 ..	1 18
AUSTRALIAN...... „	1 15 ..	2 10	1 7 ..	2 5
ASSAFŒTIDA,cm.to fin „	1 18 ..	2 9	1 3 ..	3 10
BENJAMIN,1st & 2nd „	12 0 ..	27 0	8 10 ..	24 0
Sumatra 1st & 2nd „	7 10 ..	12 0	8 0 ..	10 10
3rd ,	3 5 ..	4 7/6	3 10 ..	4 5
COPAL, Angola red „	5 10 ..	5 15	6 0 ..	6 15
Benguela „	3 10 ..	3 12/6	5 10 ..	5 15
	s. d.	s. d.	s. d.	s. d.
Sierra Leone, per lb.	0 4½ ..	0 10½	0 3 ..	0 9½
Manilla....per cwt.	12 0 ..	21 0	13 0 ..	26 0
DAMMAR, pale .... „	45 0 ..	50 0	47 0 ..	50 0
Singapore .... „	45 0 ..	50 0	43 0 ..	49 0
EUPHORBIUM .... „	11 0 ..	15 0	11 0 ..	15 0
GALBANUM .... per lb.	1 6 ..	2 0	1 6 ..	2 0
GAMBOGE,pckd.pipe per cwt.	180 0 ..	280 0	220 0 ..	300 0
GUAIACUM ....per lb.	0 8 ..	2 7	0 8 ..	2 6
KINO..............per cwt.	60 0 ..	90 0	50 0 ..	85 0
KOWRIE, rough .. „	27 0 ..	40 0	17 0 ..	30 6
scraped sorts „	34 6 ..	50 0	30 0 ..	39 0
MASTIC, picked ....per lb.	4 6 ..	6 0	6 0 ..	7 0
MYRRH, gd. & fine per cwt.	119 0 ..	280 0	120 0 ..	240 0
ord. to fair.... „	75 0 ..	115 0	40 0 ..	110 0
OLIBANUM, p. drop „	62 0 ..	68 0	70 0 ..	77 0
amber & ylw. „	54 0 ..	60 0	60 0 ..	70 0
garblings.... „	20 0 ..	39 0	23 0 ..	40 0
SENEGAL .... „	2 0 ..	2 15	3 0 ..	4 0
SANDARAC........ „	85 0 ..	100 0	55 0 ..	95 0
SHELLAC, Orange.. „	275 0 ..	290 0	202 6 ..	220 0
Liver .. „	250 0 ..	280 0	195 0 ..	200 0
THUS .... „	22 0 ..	23 0	18 0 ..	30 0
TRAGACANTH, leaf „	240 0 ..	360 0	270 0 ..	410 0
in sorts „	30 0 ..	170 0	60 0 ..	160 0

OILS.

	1874.		1873.	
	£ s.	£ s.	£ s.	£ s.
SEAL, pale ....per tun	35 10 ..	0 0	34 0 ..	34 10
yellow to tinged „	32 0 ..	35 0	31 10 ..	33 10
brown ...... „	28 0 ..	29 0	30 0 ..	31 10
SPERM............ „	105 0 ..	0 0	0 0 ..	0 0
COD .... „	38 10 ..	39 0	35 0 ..	0 0
Oils, *continued*:—	£ s.	£ s.	£ s.	£ s.
WHALE,SouthSea,pale,per tun	36 0 to	0 0	34 0	0 0
yellow „	35 0 ..	0 0	32 10 ..	33 0
brown „	28 0 ..	29 0	30 0 ..	31 0
East India, Fish „	23 10 ..	24 0	27 10 ..	0 0
OLIVE, Galipoli ...per ton	44 0 ..	0 0	45 0 ..	46 0
Trieste...... „	42 0 ..	42 10	44 10 ..	45 0
Levant .... „	41 0 ..	0 0	42 0 ..	42 10
Mogador .... „	40 0 ..	0 0	40 10 ..	0 0
Spanish .... „	44 0 ..	0 0	43 0 ..	43 10
Sicily ...... „	42 0 ..	42 10	43 0 ..	0 0
COCOANUT, Cochin.. „	43 10 ..	44 0	38 0 ..	38 10
Ceylon „	36 15 ..	37 0	32 10 ..	0 0
Sydney „	36 0 ..	36 10	28 0 ..	33 0
GROUND NUT AND GINGELLY:				
Bombay	0 0 ..	0 0	0 0 ..	0 0
Madras	35 0 ..	0 0	35 10 ..	36 0
PALM, fine..............	36 10 ..	0 0	38 0 ..	0 0
LINSEED	25 5 ..	0 0	30 5 ..	30 10
RAPESEED, English, pale ..	30 0 ..	30 5	34 10 ..	0 0
brown	28 0 ..	28 2/6	32 10 ..	0 0
Foreign, pale ..	31 10 ..	0 0	36 0 ..	0 0
brown	0 0 ..	0 0	0 0 ..	0 0
COTTONSEED	25 10 ..	25 15	29 0 ..	30 0
LARD	62 0 ..	0 0	43 10 ..	0 0
TALLOW	20 0 ..	30 0	29 0 ..	0 0
TURPENTINE, American,cks.	26 3 ..	0 0	31 6 ..	0 0
French „	0 0 ..	0 0	0 0 ..	0 0
PETROLEUM, Crude	0 0 ..	0 0	0 0 ..	0 0
	s. d.	s. d.	s. d.	s. d.
refined, per gall.	0 8¼ ..	0 8¾	1 1¼ ..	0 0
Spirit „	0 11 ..	0 0	1 0 ..	0 0

SEEDS.

	1874.		1873.	
CANARY............per qr.	86 0 ..	90 0	48 0 ..	60 0
CARAWAY, English per cwt.	0 0 ..	0 0	39 0 ..	44 0
German, &c....	24 0 ..	29 0	26 0 ..	36 0
CORIANDER	8 0 ..	18 0	16 0 ..	24 0
HEMP..............per qr.	40 0 ..	44 0	40 0 ..	41 0
LINSEED, English per qr. ..	59 0 ..	66 0	58 0 ..	61 0
Black Sea & Azof	53 0 ..	54 0	59 0 ..	60 0
Calcutta „	56 6 ..	0 0	63 0 ..	63 6
Bombay „	57 0 ..	0 0	64 0 ..	0 0
St. Petrsbrg. „	54 0 ..	0 0	56 0 ..	59 0
Mustard, brown..per bshl.	0 0 ..	0 0	10 6 ..	16 0
white.. „	10 0 ..	12 0	8 0 ..	12 6
POPPY, East India, per qr.	56 0 ..	57 0	66 0 ..	67 0

SPICES.

	1874.		1873.	
CASSIA LIGNEA ..per cwt.	60 0 ..	75 0	77 0 ..	81
Vera .... „	24 0 ..	50 0	27 6 ..	55 0
Buds .... „	120 0 ..	122 6	117 6 ..	120 0
CINNAMON, Ceylon:				
1st quality ......per lb.	2 8 ..	4 7	1 7 ..	3 6
2nd do. .... „	1 11 ..	3 8	1 4 ..	3 1
3rd do. .... „	1 6 ..	3 0	1 0 ..	2 10
Tellicherry ...... „	3 3 ..	3 5	2 7 ..	3 0
CLOVES, Penang .... „	2 0 ..	2 1	1 2 ..	1 3
Amboyna .... „	1 4 ..	1 5	0 9 ..	0 11
Zanzibar.......... „	1 3 ..	1 5	0 10 ..	0 0
GINGER, Jam., fine per cwt.	105 0 ..	200 0	110 0 ..	250 0
Ord. to good .... „	73 0 ..	100 0	66 0 ..	100 0
African .... „	58 0 ..	0 0	54 0 ..	0 0
Bengal............ „	51 0 ..	57 0	53 0 ..	54 0
Malabar .... „	51 0 ..	52 0	52 0 ..	54 0
Cochin .... „	80 0 ..	112 0	68 0 ..	120 0
PEPPER, Blk, Malabar, per lb.	0 7 ..	0 7¼	0 7⅝ ..	0 8
Singapore .... „	0 7 ..	0 0	0 7⅜ ..	0 0
White Tellicherry „	1 0 ..	1 7	2 0 ..	0 0
Cayenne.......... „	1 6 ..	2 2	1 0 ..	2 0
MACE, 1st quality .. „	3 1 ..	3 7	3 7 ..	4 2
2nd and inferior .. „	1 8 ..	3 0	2 11 ..	3 6
NUTMEGS, 78 to 60 to lb.	3 7 ..	4 4	3 4 ..	4 5
90 to 80 „	3 4 ..	3 6	3 1 ..	3 3
132 to 95 „	2 11 ..	3 3	2 7 ..	3 0
PIMENTA	0 3 ..	0 3⅛	0 2¾ ..	0 3

VARIOUS PRODUCTS.

	1874.		1873.	
COCHINEAL—				
Honduras, black ..per lb.	2 0 ..	2 10	2 3 ..	3 1
„ silver .. „	1 11 ..	2 4	2 1 ..	2 7
„ pasty .. „	1 10 ..	0 0	1 8 ..	2 0
Mexican, black .... „	2 0 ..	2 2	2 3 ..	2 5
„ silver.... „	1 9 ..	1 9	2 0 ..	0 0
Teneriffe, black .. „	2 1 ..	3 8	2 3 ..	3 9
„ silver .. „	1 11 ..	2 2	2 1 ..	2 4
SOAP, Castile......per cwt.	33 0 ..	34 0	33 0 ..	34 0
SPONGE, Turk.fin.pkd pr lb.	12 0 ..	16 0	12 0 ..	16 0
Fair to good „	4 0 ..	11 0	4 0 ..	11 0
Ordinary .. „	1 0 ..	3 6	1 0 ..	3 6
Bahama .... „	0 6 ..	3 6	0 6 ..	3 6
TERRA JAPONICA—				
Gambier ......per cwt.	26 0 ..	26 3	24 6 ..	24 9
Free cubes .... „	40 0 ..	41 0	34 0 ..	38 0
Cutch .... „	25 0 ..	26 0	20 6 ..	21 0
WOOD, DYE, Bar ..per ton	£5 0 ..	£0 0	£3 7/6 ..	£3 10
Brazil, Branch .... „	18 0 ..	27 0	27 0 ..	30 0
„ Logs ...... „	9 0 ..	16 0	9 0 ..	16 0
Cam.............. „	33 0 ..	39 0	15 0 ..	28 0
Fustic, Cuba ...... „	8 10 ..	9 10	9 0 ..	9 10
Jamaica .... „	7 10 ..	8 10	6 10 ..	6 5
LOGWOOD, Campeachy „	9 10 ..	10 5	8 10 ..	9 0
Honduras ...... „	6 15 ..	6 17/6	6 5 ..	6 10
St. Domingo .... „	5 15 ..	6 0	5 10 ..	5 15
Jamaica .... „	5 5 ..	5 12/6	5 10 ..	5 15
LIMA, first pile .... „	11 10 ..	12 0	11 0 ..	11 10
RED SANDERS .... „	6 17/6 ..	0 0	6 5 ..	0 0

NOTES AND QUERIES

CORRESPONDENTS will please observe that the Editor cannot undertake to send private replies to the class of queries which are answered in this page. He will be much obliged if readers will communicate items for this department as well as draw from it. All communications should give (in confidence) the name and address of the writer, though any *nom de plume* may be adopted. No query can be attended to in the current month which reaches this office after the 10th.

R. G. (Manchester) sends us the following item:—Paste.—This useful article is kept moist and specially sweet and free from smell by mixing glycerine with it, say about one teaspoonful of glycerine to ½ lb. of paste. I was led to try glycerine in this way from a remark of Squire's: "It (glycerine) is antiseptic; 1 part to 10 water preserving animal substances equal to spirit."

Exemplum.—By a "gold watering" we suppose you mean the process practised for gilding before electro-gilding was known, and described as "water-gilding." One part of gold is heated with six parts of mercury, and the resulting amalgam pressed until the superfluous mercury is all got rid of. The resulting mass is of about the consistence of butter, and is composed of about 1 part gold and 2 parts mercury. The article to be treated is first rubbed over with a solution of mercurous nitrate; the amalgam is then applied and attaches itself to the mercurialised surface. After washing it is heated over burning charcoal until the colour becomes of a dull yellow. Meanwhile it should be lightly brushed with a soft brush. It is then polished by a wheel brush moistened by dilute vinegar. A mixture of bees' wax and verdigris is next employed, the latter removing the remaining mercury. Lastly the article is burnished; washed with dilute nitric acid, then with water and dried. The process is, we believe, scarcely ever followed now.

L. L. D.—You seem to have overlooked the fact that we keep a few advertisement pages going for the convenience of gentlemen who wish to call attention to their business.

E. J.—You might expect about 40*l.* a year indoors.

Mr. H. J. Bellingham, the blind candidate at the last election of annuitants on the Pharmaceutical Benevolent Fund, wishes through our columns to record his most sincere and heartfelt thanks to all those gentlemen who so kindly assisted him and placed him at the head of the poll.

Justitia.—Our best return for the compliments you are good enough to pay us will be to offer you a word of counsel which will be honest even if it should seem harsh. You will thank us for it ten years to come, and we can wait. When the cellar-cleaning day comes round again, give your very best attention to that important occupation. If you intend to earn an honest living throw to the four winds those false notions of gentility which you seem to have imbibed to a small degree. They are the accompaniments of a *dilletante* existence, not of a true working life. We trace some sound sense in your letter, and hope by this advice to stimulate that.

Quercus Infectoria.—You have not observed our rules by giving your real name; but apart from this we would prefer to suspend the subject you write about.

Messrs. Woods Brothers, of Jersey, wish to ascertain the address of "Burry, perfumer, London, manufacturer of the Pompadour Face Powder." Why don't you advertise, Mr. Burry?

A Dublin Man.—*Syrup Calcis Lacto-Phosphas*:—

Chloride of Calcium, ℥i. from [illegible]
Phosphate of Soda, ℥iv.
Concd. Lactic Acid, ℥i.

Dissolve the salts separately, mix the solutions, wash the precipitate and dissolve it in the acid. Filter and mix with sufficient syrup to make 2½ pints.

J. N. S.—A good permanent green for a show-bottle is made by dissolving in water sulphate of copper in the proportion of 2 ozs. to the pint, and adding gradually bichromate of potash or nitric acid till the proper shade is obtained.

T. G. H.—We have not seen any method of disinfecting a room or a house so thoroughly effective as the employment of Calvert's Carbolic Vaporiser, as sketched in THE CHEMIST AND DRUGGIST for June 1873. In addition to the use of this, the paper should be stripped from the walls, and the ceiling and walls limewashed. The bedding should be not only disinfected by the vapour already named, but should also be exposed for a day or two to the action of the air.

Atramentum.—For a good black ink, take bruised galls 12 ozs. Macerate for a week in a gallon of cold water, then add:—

Sulphate of iron in solution, 6 ozs.
Mucilage of gum arabic, 6 ozs.
Creosote, 6 drops.

See an article on "Writing Fluids" in our issue of June 1872.

Query.—The operation of the Pharmacy Act does not extend to the Isle of Man.

E. B. wants the address of the maker of a machine for manufacturing "compressed pills." E. B. has heard that pills can be made by it without the employment of any excipient, but simply by compressing the ingredient or ingredients. The inventor of this marvellous machine has assuredly been curiously modest.

A correspondent favours us with the following notice of a worthy follower of our calling:—"Your obituary has lately contained few names more worthy of a passing notice than that of the late Mr. Isaac Smith, chemist, Thornley, Durham, who died a few weeks ago of heart disease. No place is better suited to show forth the merits of my deceased friend than the pages of your journal, in which, to the last, he took a deep interest. Mr. Smith had a pure taste, and was fond of literary pursuits. His reading amongst the ancient classics was very extensive, and his leisure hours were almost entirely devoted to the study of the Greek and Roman writers. In other branches of education he was no less proficient, as his knowledge of mathematics and modern languages amply showed. His varied acquirements rendered him well fitted to occupy important positions of public trust and usefulness; but his modesty of character and retiring disposition induced him to pursue the even tenour of his way apart from the noisy walks of public life, where ambition often outstrips worth. In all the relationships of life his character shone and his influence was felt. He was a kind and considerate husband, and a genial and warm-hearted friend. His sudden death cast a gloom over the neighbourhood, and his loss is lamented by a large circle of friends and admirers. The premises occupied by the deceased are taken by Dr. J. Mitchell Monteith, a local practitioner of considerable repute."

J. A. T.—(1.) *Shoemaker's Ink* (as was stated in this column in April last), is simply the thick residue always found at the bottom of the cask or other vessel in which ordinary black ink has been stored. (2.) *Ductile Physic Mass.* It is a frequent practice to add a little salt of tartar or acetate of potash in order to retain the ductility of ball masses, but as these salts are likely to have a chemical action on the ingredients, their employment is not advisable. We should think a little glycerine would be better. (3.) You can only make cod-liver oil non-depositing by separating the "margarine," which forms an essential part of it. You would then have a non-depositing oil, but it would not be what we now term "cod-liver oil." If the leopard were to change his spots, he would no longer be the animal we now know as a leopard.

Napoleon.—The title of Pharmacien is obtained from either of the French Ecoles de Pharmacie at Paris, Montpelier, or Nancy. The Government has proposed the establishment of a fourth school at Bordeaux. A pharmacien of the 1st class is required to have taken the degree of bachelor of sciences or of letters, to have served three years in a pharmacy, to have taken 12 quarterly terms of instruction, to have followed practical study for three years, and to have passed five half-yearly examinations. The fees, &c., for the course amount in all to 1,390 francs. As pharmacien of the 2nd class, three examinations and one year of study are necessary. Not such a high preliminary examination is required as for the 1st class, but one more nearly corresponding to our preliminary. Though less study is exacted, a longer term of service (six years) in a pharmacy is required, but two years of this period may be replaced by one extra year of study. The cost in fees for a pharmacien of the 2nd class amounts to 790 francs.

R. S.—*Areca Nut Tooth Paste.*—Dissolve ½ dram chlorate of potash in ½ oz. peppermint (or rose) water, and mix in gradually 1 oz. areca nut charcoal. This can be used in this form, or can be mixed with an equal weight of honey. R. S. also wants to know of a book treating on the electric telegraph and electric bells.

Liber.—Get Attfield's "Chemistry."

D. L. A.—Fresenius' "Analysis," published by Churchill in two volumes, qualitative and quantitative, each at 12*s.* 6*d.*

Enquirer (Chicago) wants to know what is English blue ash? If anyone can tell us, we shall be obliged.

Iodised Glycerine.—A correspondent of the *American Druggists' Circular* gives a formula which will, no doubt, prove of interest to our readers. It contains as much free iodine as the officinal tincture, but has the advantage of not staining the skin. The physicians who have used it, says this correspondent, pronounce it equal to the usual tincture for local application. It is made as follows:—

Iodide of potassium	1 ounce.
Resublimed iodine	1 ,,
Glycerine, sufficient to complete	16 fluid ounces.

Powder the iodide, and dissolve in about four ounces of the glycerine; add the iodine, and rub well in a mortar until it is dissolved, adding more glycerine if necessary. Lastly, add enough glycerine to complete 16 fluid ounces. The result is a beautiful, permanent solution, which will be found in many cases preferable to the officinal tincture.

Amber-coloured Vials.—The following is an easy method, well known to German apothecaries, for giving that colour to vials, jars, &c.:—Make a varnish by dissolving asphaltum in benzine, and paint the outside of the bottles with it, using a fine camel's-hair brush. After standing about five or ten minutes the varnish will be found dry and hard. In thin layers, it looks black; in thinner ones it is of the most approved smoked-amber colour, by transmitted light. To all appearances it is perfectly jet-black by reflected light, and looks well on the shelves, provided the painting has been done with some degree of carefulness.